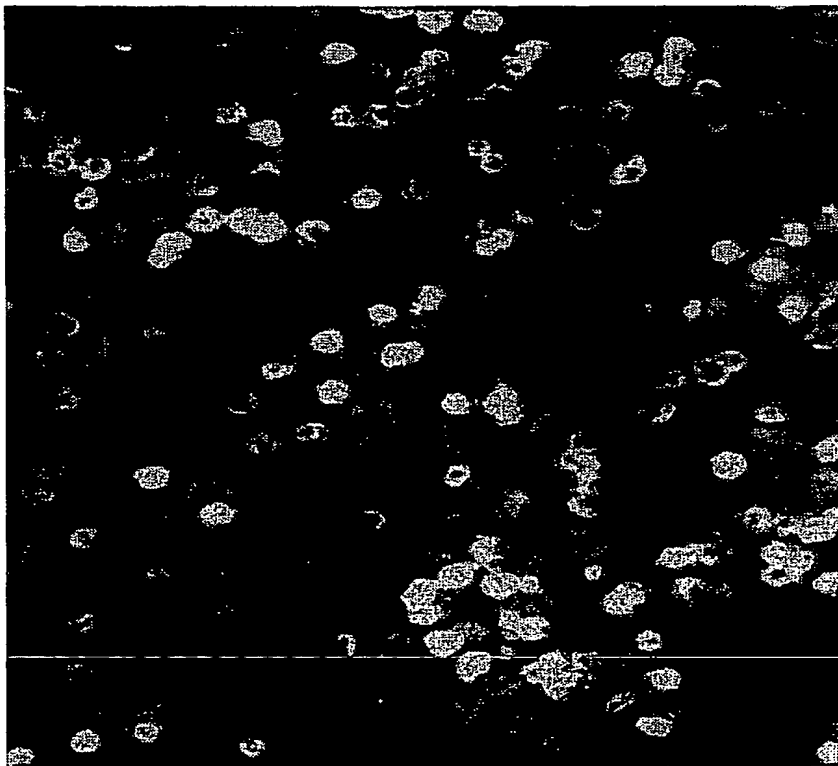


Invasion of Hs-27 control cells



Invasion of HT1080 cells

Fig. 1

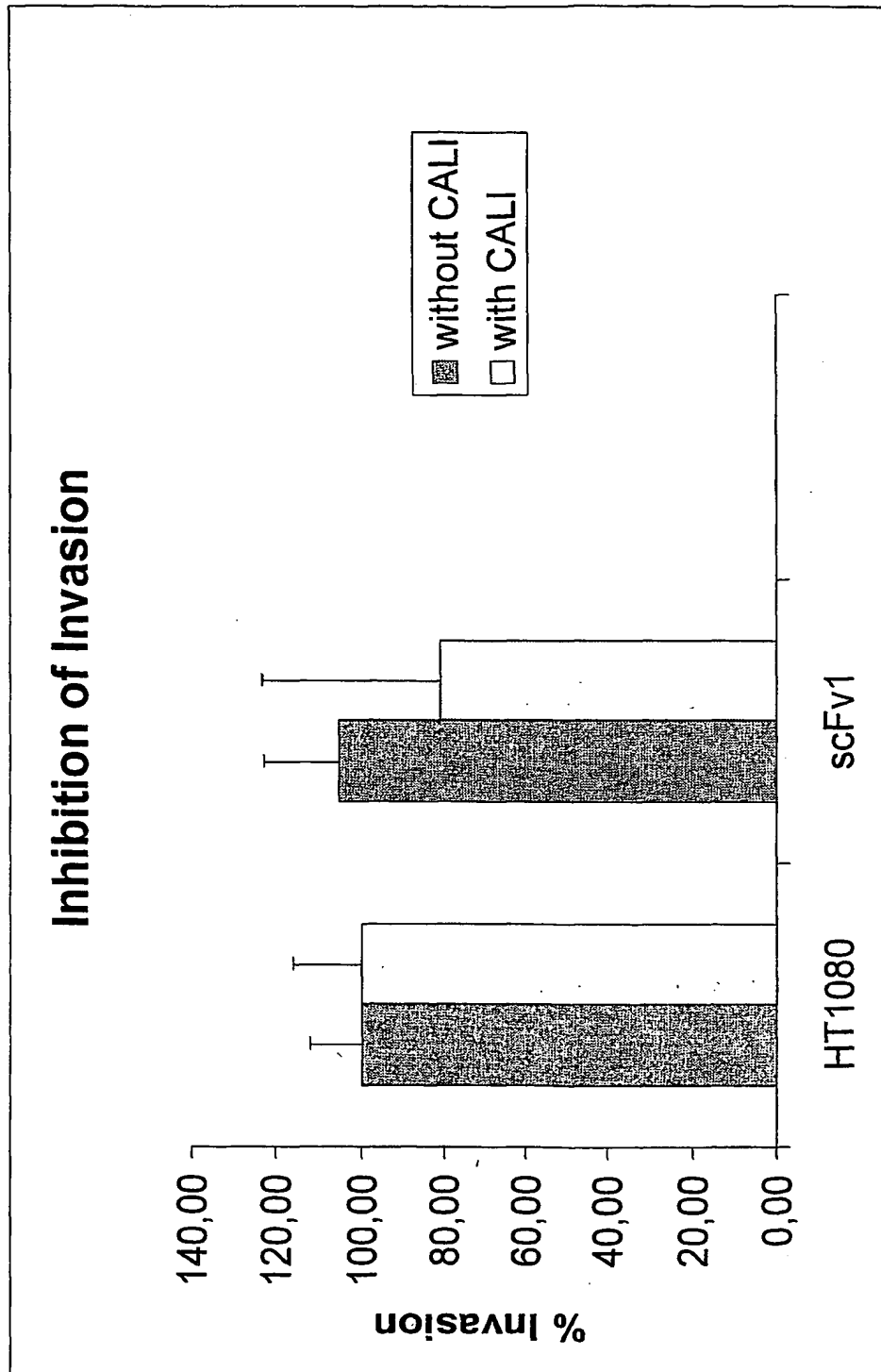


Fig. 2

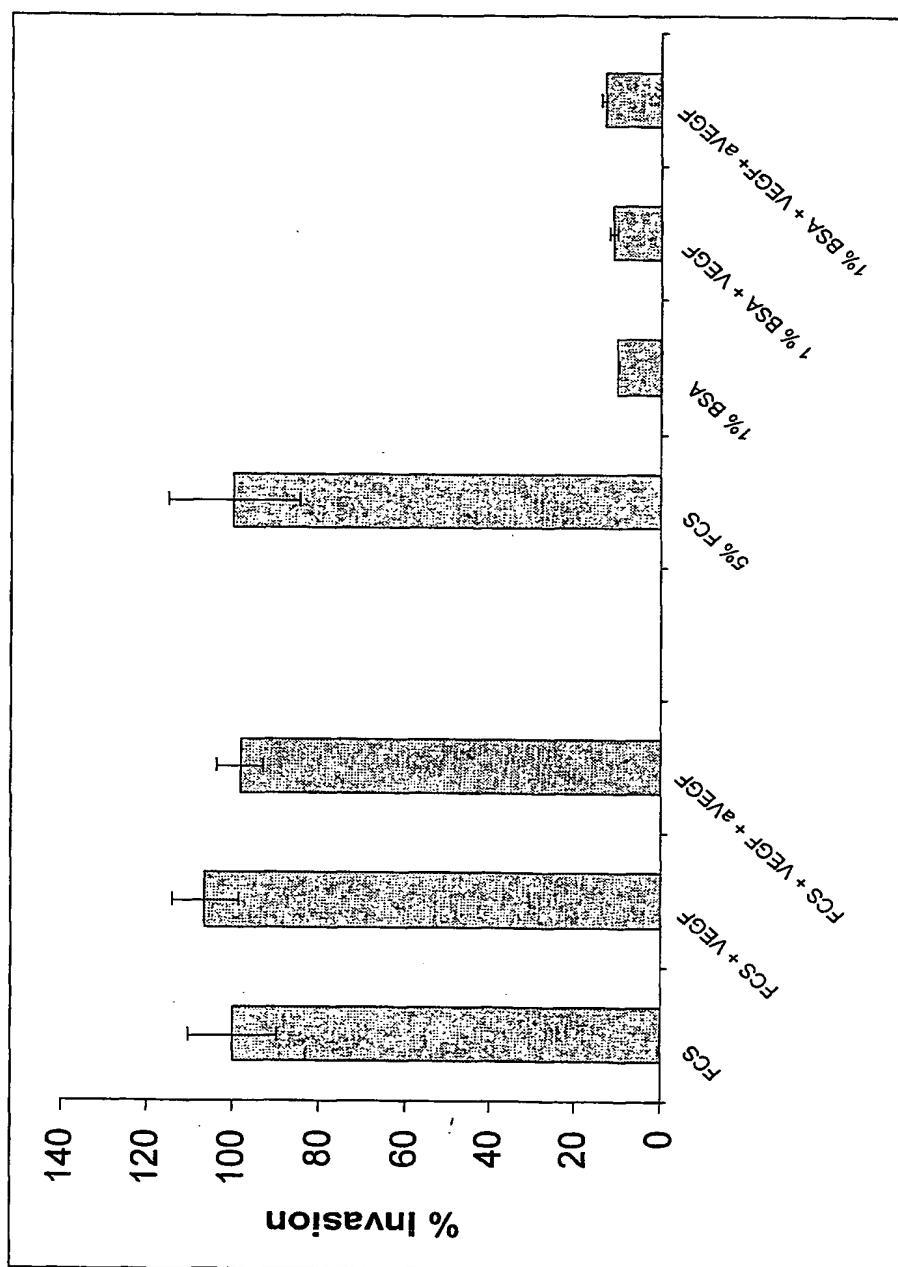


Fig. 2a

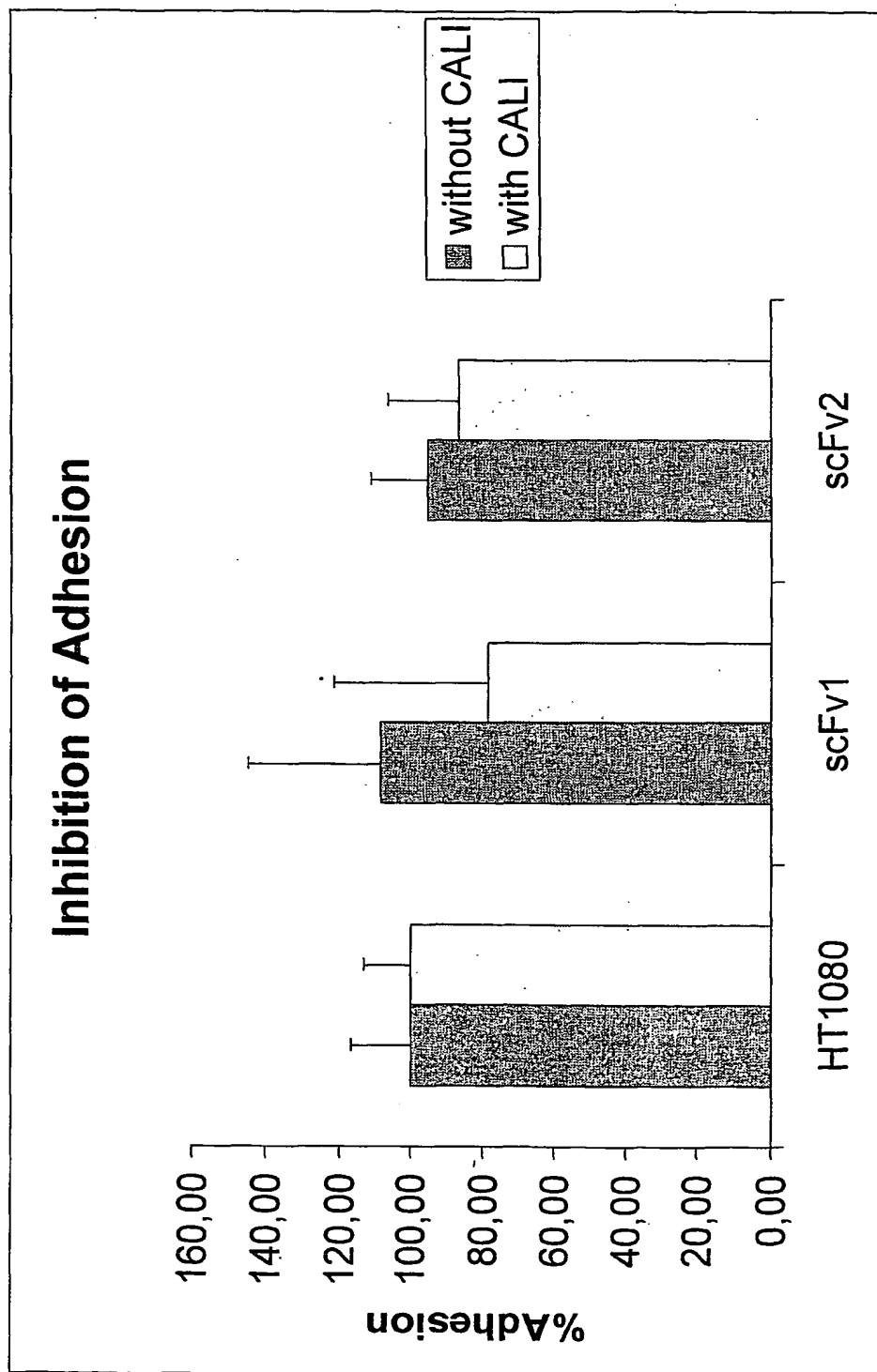


Fig. 3

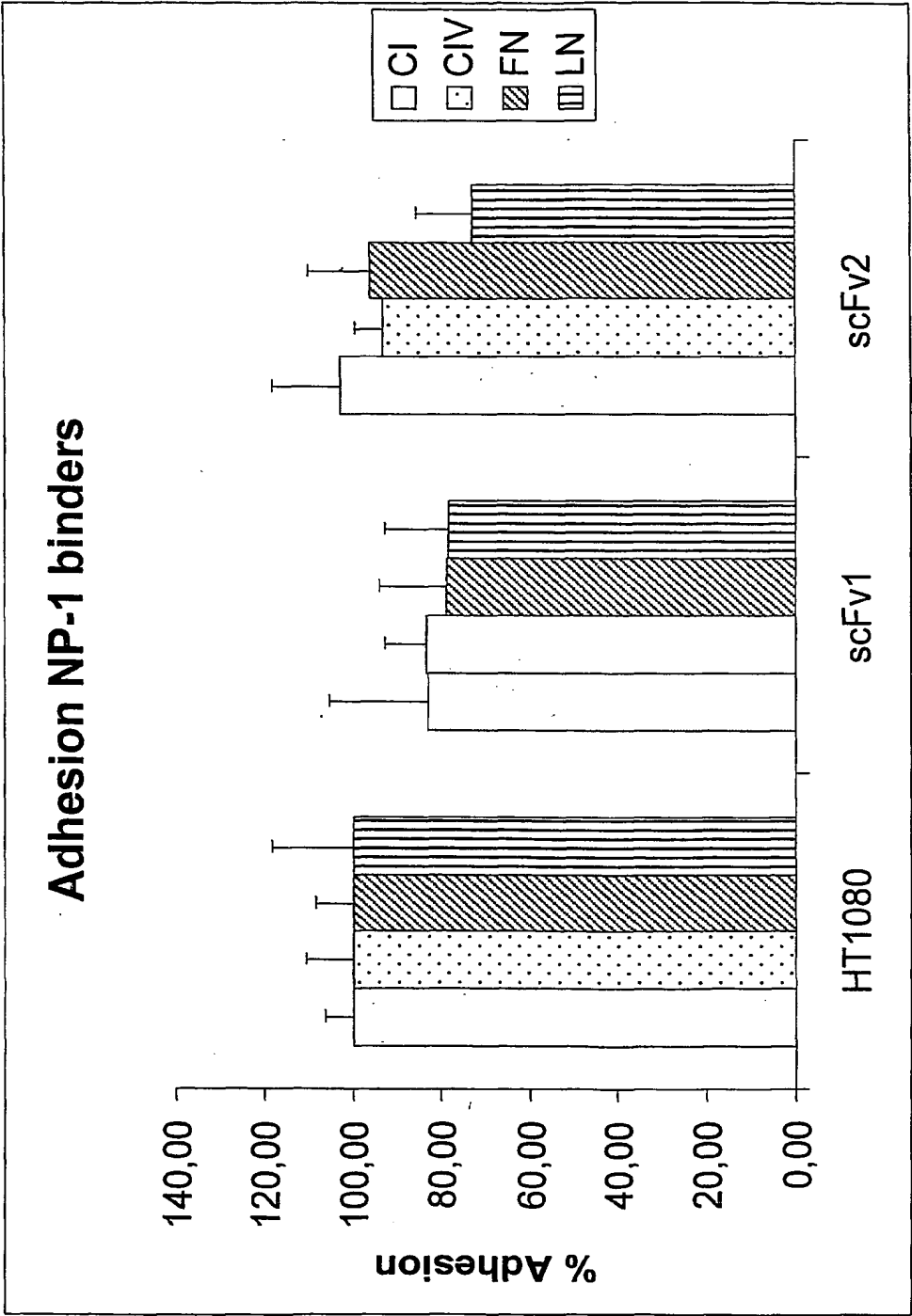


Fig. 4

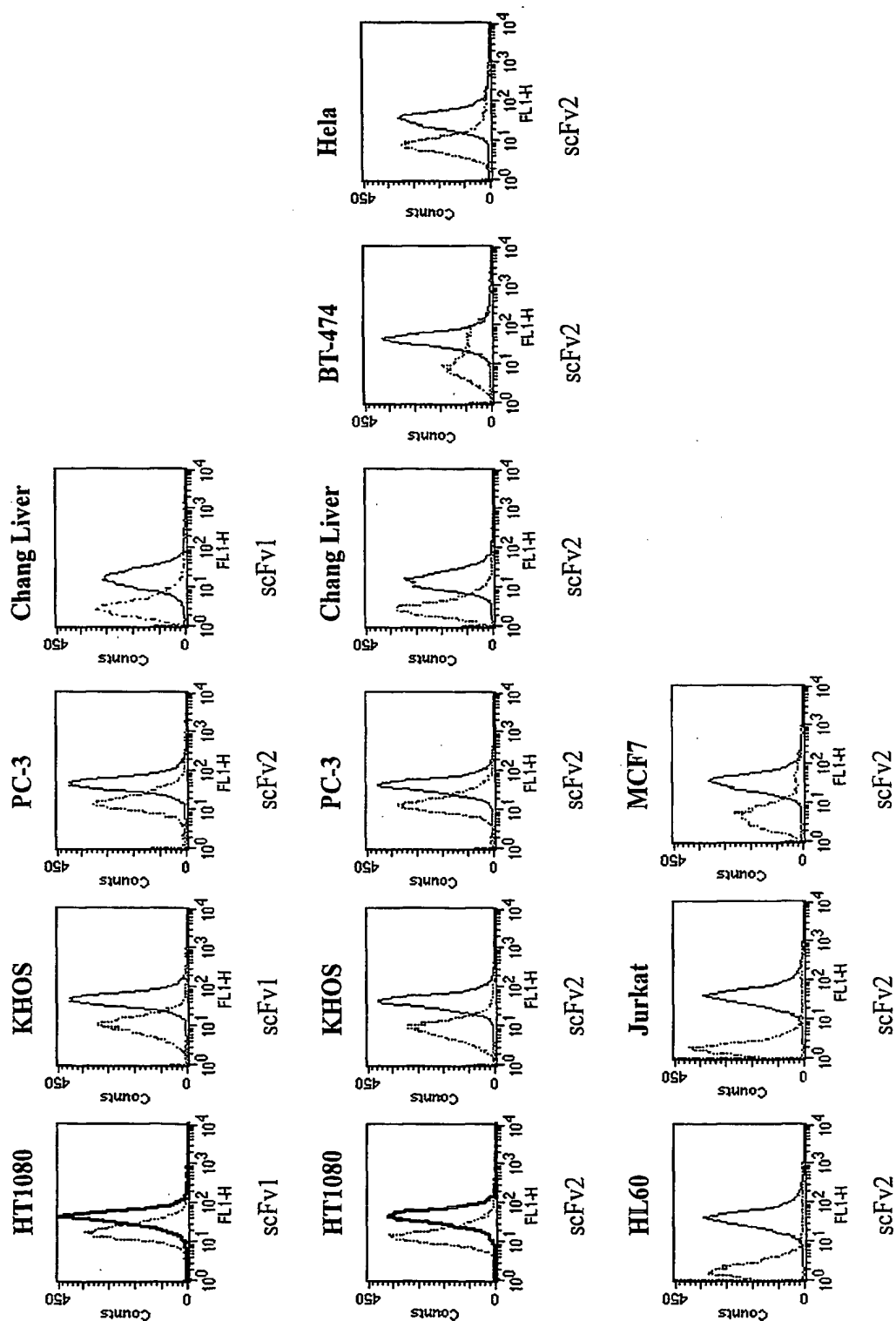


Fig. 5

~ 130 kDa = Neuropilin

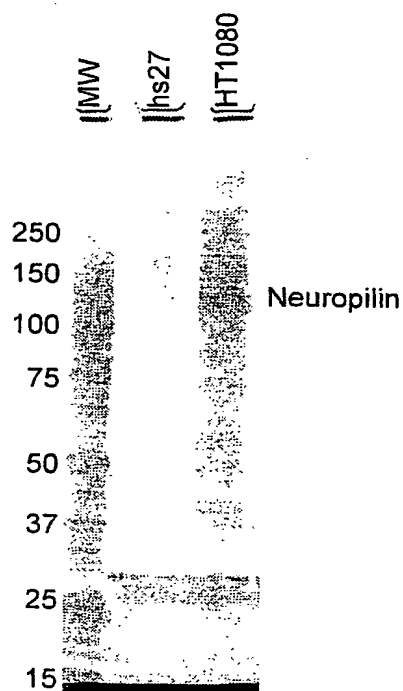


Fig. 6

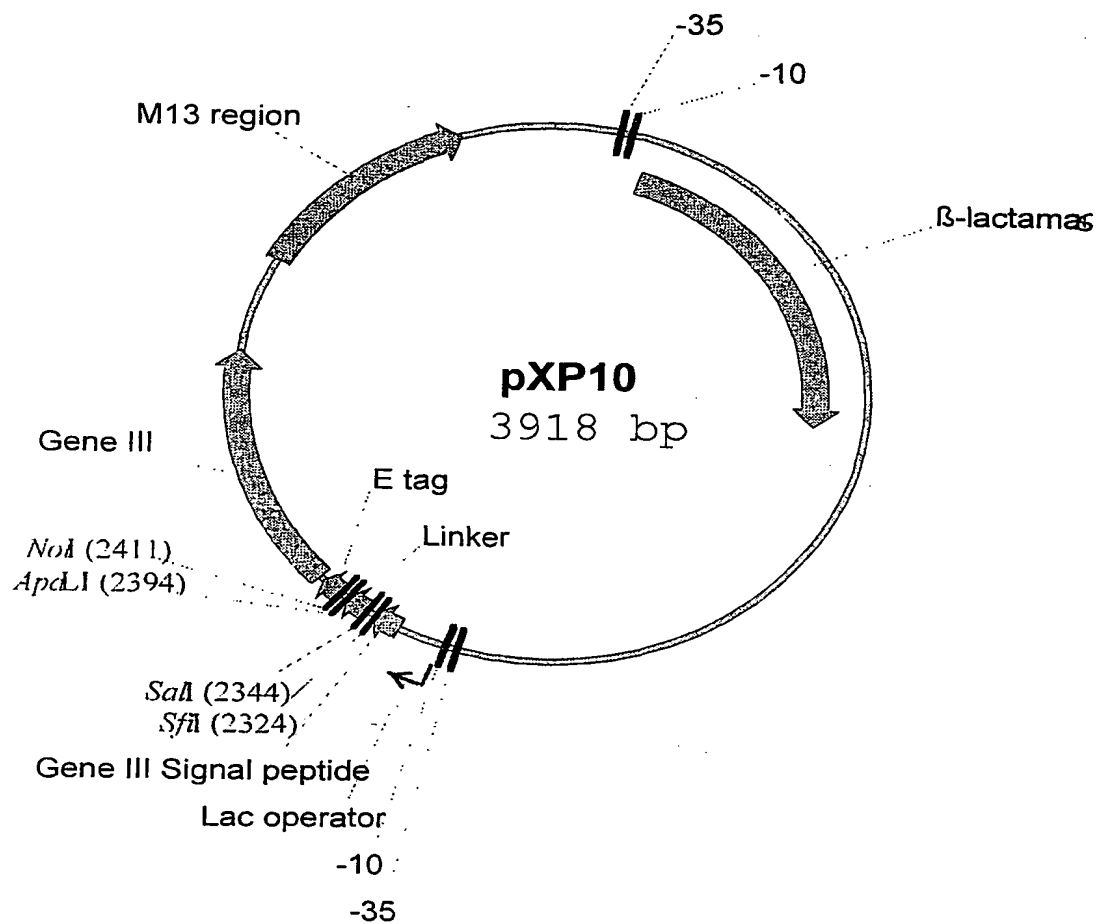


Fig. 7a



## Nucleotide Sequences pXP10

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Fig. 7b

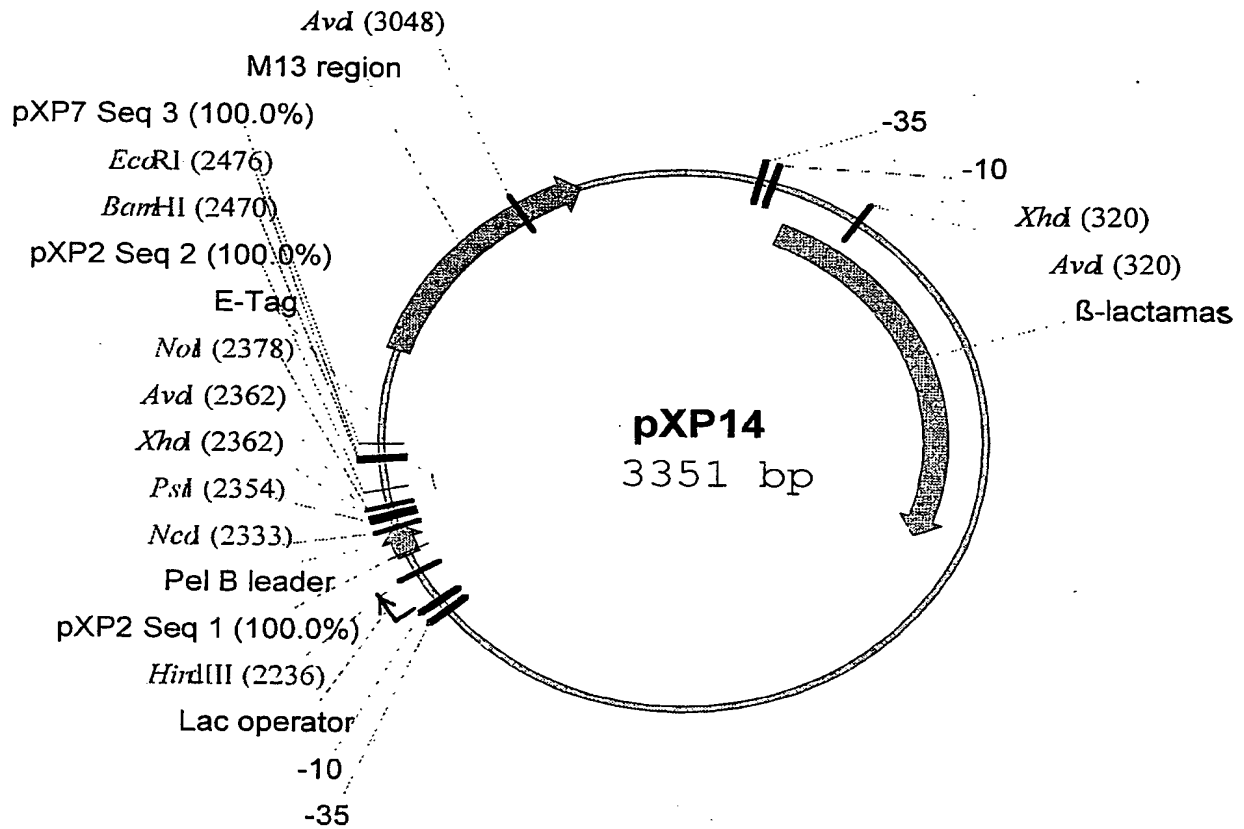


Fig. 8a

## Nucleotide Sequences pXP14

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2501 GTCGTGACTG GGAAAACCCCT GCGGTTACCC AACTTAATCG CCTTGCAGCA  
CAGCACTGAC CCTTTTGGGA CCGCAATGGG TTGAATTAGC GGAACGTCGT  
2551 CATCCCCCTT TCGCCAGCTG GCGTAATAGC GAAGAGGCCG GCACCGATCG  
GTAGGGGGAA AGCGGTCGAC CGCATTATCG CTTCTCCGGG CGTGGCTAGC  
2601 CCCTTCCCAA CAGTTGCGCA GCCTGAATGG CGAATGGCGC CTGATGCGGT  
GGGAAGGGTT GTCAACGCGT CCGACTTACC GCTTACCGCG GACTACGCCA  
2651 ATTTTCTCCT TACGCATCTG TCGGGTATTT CACACCGCAT ACGTCAAAGC  
TAAAAGAGGA ATGCGTAGAC ACGCCATAAA GTGTGGCGTA TGCAGTTTCG  
2701 AACCATAGTA CGCGCCCTGT AGCGGCGCAT TAAGCCCGGC GGGTGTGGTG  
TTGGTATCAT GCGCGGGACA TCGCCGCGTA ATTCGGGCGC CCCACACCAC  
2751 GTTACGCGCA GCGTGACCGC TACACTTGCC AGCGCCCTAG CCCCCGCTCC  
CAATGCGCGT CGCACTGGCG ATGTGAACGG TCGCGGGATC GGGGGCGAGG  
2801 TTTTCGCTTTC TTCCCTTCCT TTCTCGCCAC GTTCGCGGC TTTCCCGTC  
AAAGCGAAG AAGGGAAGGA AAGAGCGGTG CAAGCGGCCG AAAGGGGCAG  
2851 AAGCTCTAAA TCGGGGGCTC CCTTTAGGGT TCCGATTTAG TGCTTTACGG  
TTCGAGATTT AGCCCCGAG GGAAATCCCA AGGCTAAATC ACGAAATGCC  
2901 CACCTCGACC CCAAAAACT TGATTTGGGT GATGGTTCAC GTAGTGGGCC  
GTGGAGCTGG GGTTTTTTGA ACTAAACCCA CTACCAAGTG CATCACCCGG  
2951 ATCGCCCTGA TAGACGGTTT TTCGTCCTTT GACGTTTCGAG TCCACGTTCT  
TAGCGGGACT ATCTGCCAAA AAGCAGGAAA CTGCAAGCTC AGGTGCAAGA  
3001 TTAATAGTGG ACTCTGTTC CAAACTGGAA CAATACTCAA CCCTATCTCG  
AATTATCACC TGAGAACAAG GTTTGACCTT GTTATGAGTT GGGATAGAGC  
3051 GGCTATTCTT TTGATTTATA AGGGATTTTG CCGATTTTCG CCTATTGGTT  
CCGATAAGAA AACTAAATAT TCCCTAAAAC GGCTAAAGCC GGATAACCAA  
3101 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT  
TTTTTTACTC GACTAAATG TTTTAAATT GCGCTTAAA TTGTTTTATA  
3151 TAACGTTTAC AATTTTATGG TGCAGTCTCA GTACAATCTG CTCTGATGCC  
ATTGCAAATG TTAAAATACC ACGTCAGAGT CATGTTAGAC GAGACTACGG  
3201 GCATAGTTAA GCCAGCCCCG ACACCCGCCA ACACCCGCTG ACGCGCCCTG  
CGTATCAATT CGGTCGGGGC TGTGGGCGGT TGTGGGCGAC TGC GCGGGAC  
3251 ACGGGCTTGT CTGCTCCCGG CATCCGCTTA CAGACAAGCT GTGACCGTCT  
TGCCCGAACA GACGAGGGCC GTAGGCGAAT GTCTGTTTCA CACTGGCAGA  
3301 CCGGGAGCTG CATGTGTCAG AGGTTTTTAC CGTCATCACC GAAACGCGCG  
GGCCCTCGAC GTACACAGTC TCCAAAAGTG GCAGTAGTGG CTTTGC GCGC  
3351 A  
T

Fig. 8b

**cDNA primers**

VLK-c	CTGGATGGTGGGAAGATGGA
VLL-c	TCAGAGGAAGGAAACAGGGT
IgG1-c	CTTACAACCACAATCCCTGGGCACAATTTT
IgG2a-c	CTTTGTGGGCCCTCTGGGCTCAAT
IgG2b	TGAAATGGGCCCGCTGGGCTCAAG
IgG3-c	GGGCTTGGGTATTCTAGGCTCGAT

**VH forward primers without restriction sites**

M-VH1	GAGGTGCAGCTTCAGGAGTCAGG
M-VH2	CAGGTGCAGCTGAAGGAGTCAGG
M-VH3	GAGGTCCAGCTGCAACAGTCTGG
M-VH4	GAGGTTTCAGCTGCAGCAGTCTGG
M-VH5	CAGGTCCAACCTGCAGCAGCCTGG
M-VH6	CAGGTTTCAGCTGCAGCAGTCTGG
M-VH7	GAGGTGAAGCTGGTGGAGTCTGG
M-VH8	GAGGTGAAGCTGGTGGAACTCTGG
M-VH9	GAGGTTTCAGCTTCAGCAGTCTGG

**VH backward primers without restriction sites**

M-JH1	TGAGGAGACGGTGACCGTGGTCCC
M-JH2	TGAGGAGACTGTGAGAGTGGTGCC
M-JH3	TGCAGAGACAGTGACCAGAGTCCC
M-JH4	TGAGGAGACGGTGACTGAGGTTCC

**VL forward primer without restriction sites**

M-VK1	GACATTGTGATGACACAGTCTCC
M-VK2	GATGTTGTGATGACCCAACTCC
M-VK3	GATATCCAGATGACACAGACTCC
M-VK4	CAAATTGTTCTCACCAGTCTCC
M-VL1	CAGGCTGTTGTGACTCAGGAATC

**VL backward primers without restriction sites**

M-JK1	TTTGATTTCCAGCTTGGTGCCTCC
M-JK2	TTTTATTTCCAGCTTGGTCCCCC
M-JK3	TTTCAGCTCCAGCTTGGTCCCAGC
M-JL1	ACCTAGGACAGTGACCTTGGTTC

Fig 9



**VH forward primers with restriction sites**

MVH1 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTGCAGCTTCAGGAGTCAGG
MVH2 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTGCAGCTGAAGGAGTCAGG
MVH3 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTCCAGCTGCAACAGTCTGG
MVH4 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTTCAGCTGCAGCAGTCTGG
MVH5 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTCCAAGTGCAGCAGCCTGG
MVH6 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTTCAGCTGCAGCAGTCTGG
MVH7 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTGAAGCTGGTGGAGTCTGG
MVH8 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTGAAGCTGGTGGAAATCTGG
MVH9 Sfil	GTCCTCGCAACTGCGGCCAGCCGGCCATGGCCGAGGTTCAGCTTCAGCAGTCTGG

**VH backward primers with restriction sites**

MJH1 SalI	GAGTCATTCTCGTGTGACACGGTGACCGTGGTCCC
MJH2 SalI	GAGTCATTCTCGTGTGACACTGTGAGAGTGGTGCC
MJH3 SalI	GAGTCATTCTCGTGTGACACAGTGACCAGAGTCCC
MJH4 SalI	GAGTCATTCTCGTGTGACACGGTGACTGAGGTTC

**VL forward primers with restriction sites**

MVK1 ApaI	TGAGCACACAGTGCACTCGACATTGTGATGACACAGTCTCC
MVK2 ApaI	TGAGCACACAGTGCACTCGATGTTGTGATGACCCAAACTCC
MVK3 ApaI	TGAGCACACAGTGCACTCGATATCCAGATGACACAGACTCC
MVK4 ApaI	TGAGCACACAGTGCACTCCAAATTGTTCTCACCCAGTCTCC
MVL1 ApaI	TGAGCACACAGTGCACTCCAGGCTGTTGTGACTCAGGAATC

**VL backward primers with restriction sites**

M-JK1 NotI	GAGTCATTCTCGACTTGCGGCCGCTTTGATTTCCAGCTTGGTGCCTCC
M-JK2 NotI	GAGTCATTCTCGACTTGCGGCCGCTTTATTTCCAGCTTGGTCCCCC
M-JK3 NotI	GAGTCATTCTCGACTTGCGGCCGCTTTCAGCTCCAGCTTGGTCCCAGC
M-JL1 NotI	GAGTCATTCTCGACTTGCGGCCGCACCTAGGACAGTGACCTTGGTTCC

Fig. 9

Polypeptide or NPB	SEQ ID No.	Protein Sequence	SEQ ID No. of the CDR 3 as underlined
scFv1	1	1 EVQLQQSGPE LVKPGALVKI SCKASGYTIV SYDINWVKQR PQQGLEWIGW 51 IYPGDGSTKY NEKEFGKATL TVDKSSTTVY MQLSLTSSEN SAVYFCARGG 101 KYFDYWGQGT TLTIVSTGGG SGGGGSGGGG SALDIVMTQS PKFMSTSVGD 151 RVSVTCKASQ NVATNVAWYQ QKPGQSPKPL TYSASFSSG VPDREFTGSGS 201 GTDFTLTISN VQSEDLAEYF CQQYNSYPYT FGGGTKLEIK AAAGAPVPYP 251 DPLEPRGAAS AWSHPQFEK*	73
scFv2	2	1 EVQLLESGGG LVQPGGSLRL SCAASGFTFS SYAMSWVRQA PGKGLEWVSA 51 ISGSGGGTYY ADSVKGRFTI SRDNSKNTLY LQNSLRAED TAVYYCARDS 101 GLQQGPRRRG ARVNFYIYGL DWGRGTTVT VSSGGGGSGG GSGGGGSAQ 151 AVLTQPSSAS GTPGQRTVIS CSGSNSNIGR NYVEWYQQFP GTAPKILIYR 201 NNQRPSGVPD RFSGSKSGTS ASLAISGLRS EDEADYYCAS WDDSLTWVFG 251 GGTKVTVLGA AAGAPVPYPD PLEPRGAASA WSHPQFEK*	74
scFv3	5	1 ASVKVSKTS GYTFIAYIVH WVRQAPGQGL EWMGRINPNT GGINLAQKFQ 51 GRVTVTRDTS ISTAHMELSR LSSDDTAVYY CARERIVPAG LRNRGMVTAV 101 GMDVWGRGTL VTVSSGGGGS GGGGGGGGGS AQSIVTQPPS MSGTPGQRTV 151 ISCSGSRNSI GRNYVYVYQQ FPGTAPKLLI YRNNERPSGV PDRFSASKSG 201 TSASLAISGL RSEDEADYYC ATWDDSLSGT WVEGGGTKLT VLGAAG	75
scFv4	6	1 LLESGGGVLV PGGSRLRSCA ASGTFESSYA MSWVRQAPGK GLEWVSAISG 51 SGGSTYYADS VKGRFTISR DSKNTLYLQM NSLRAEDTAV YYCARGGGRY 101 DSSHGFDSWG RGTMTVTVSSG GGGSGGGGSG GGSALSVEL TQPPSVSVAP 151 GETATITCGG RSLGSKVYVH YQKPGQAPT LVIYYDSVRP SGVPERFSAS 201 NSRLSATLTV SRVEAGDEAD YYCQVWDRSS DHYVEGTGK LTVLGAAA	76
scFv5	7	1 QLLESGGGVLV QPGGSRLRSC AASGTFESSY AMSWVRQAPG KGLEWVSAIS 51 GSGGSTYYAD SVKGRFTISR DSKNTLYLQ MNSLRAEDTA VYCARDWRW 101 QQFGGWEDPW GRGTLTVTVSS GGGGGGGGGS GGGSALETT LTQSPATLSL 151 SPGETATLFC RASQSVRNLL VWYQOKLQQA PRLLIFGAST RASGIPDRFT 201 GSGSGTDFSL TITKLEPEDE AVYYCQRYGG FPITFGQGR LKIKRAAA	77
scFv6	8	1 QLVQSGGGVLV QPGGSRLRAC EASGRFFSSY GMSWVRQAPG KGLEWVSSMS 51 DSGANTYYAD SVKGRFTISR DNAKMLYLQ MSSLRGEDTA VYCATLFRG 101 SGYVRHWGRG TLTIVTVSSGGG GSGGGGGGGS GSAQAVLTQP SSASGTPGQR	78

Fig. 40

scFv7	9	151	VIISCSGSS	NIASNYVYVY	QQLPGTAPKL	LISKNSRRPS	GVPDRFSGSK	79
		201	SGTSASLAIS	ELRSEDEADY	YCAAWDDRLS	GPAGGGGTKL	TVLGAAA	
		1	KKPGSSVKVS	CKASGTFSS	YAISWVRQAP	GQGLEWMGGI	IPMSGTPNYA	
		51	QKFQDRVTIT	ADKSTSTAYM	ELSLRSEDY	AVYYCARGGR	YVDFGRGPSY	
		101	HYIYMDVWGR	GTLTVTVSSGG	GGSGGGSGG	GGSAQSVLTQ	PPSASGTPGQ	
scFv8	10	151	RVTISCSGAT	SNIGRNYVYW	YHQLPGTAPK	LLIYRNDQRP	SGVPDRFSGS	80
		201	KSGTSASLAI	SGLRSDDEAD	YCAAWDDNL	SGLFFGGGTK	LTVLGAAA	
		1	AQVQLQWGP	GLVKASELIS	LNCITVSGSSL	SSGGYYWSWI	RQHPGKGLEW	
		51	IGYIHYSGST	YINPSLKS RV	TISVDTSKNQ	FSLKLSSTVA	ADTAVYYCAR	
		101	VPLRFDFGFDV	WGQGTLLTVS	SGGGGGGGG	SGGGGSDIQM	TQSPSTLSAS	
scFv9	11	151	IGDRVTITCR	ASEGIYHWLA	WYQOKPGKAP	KLLIYKASSL	ASGAPSRFSG	81
		201	SGSGTDFTLT	ISSLPDDFA	TYICQOYSNY	PLTFGGGTKL	EIKRAAA	
		1	ELKKFGSSVK	VSCKAPRGTF	NSYALNWVRQ	APQGLEWMG	GIPIFGSAN	
		51	YAPKEQGRVT	ITADESTTA	YLELSSLRSE	DTAVYYCARA	LHLDYVWRTY	
		101	NYIEDNWGKG	TMVTVSSGGG	SGGGGGGGG	GSALSELTLQ	DPAVSVALGQ	
scFv10	12	151	TVRITCQGDS	LSRYIASWYQ	QKPGQAPVLV	IYCKNSRPSG	IPDRFSGSDS	82
		201	GNTASLTITG	AQAEDEADYY	CNSRDRSGNR	VVFGGGTKLT	VLGAAA	
		1	SIRLSCAASG	FTFSSYAMSW	VRQAPGKGLE	WYSAISGSG	STYYADSVKG	
		51	RFTISRDN SK	NTLYLQMN SL	RAEDTAVIYC	ARGVTYHYDH	DRRGVTAQIY	
		101	NHGLDVWGRG	TTVTVSSGGG	SGGGGGGGG	GSAQAVLTQP	SSASGTPGQR	
scFv11	13	151	VTISCSGSSS	NIGKNYVYVY	QQLPGTAPKL	LIYRNNQRPS	GVPDRFSGSK	83
		201	SGTSASLAIS	GLRSEDEADY	YCAARDNGLS	AYVIFGGGTK	LTVLGAAA	
		1	VKKPGESLKI	SCKSGSYSEF	NYWTAWVRQM	PKGLEWMGI	IYPGDSDTIY	
		51	SPSFRGQVTI	SADKSI STAY	LQWSSLKASD	TAMYYCARQG	CSGGKCYEKM	
		101	YASDIWGRGT	LVTVSSGGGG	SGGGGGGGG	SALSVELTQP	PSASGTPGQR	
scFv12	14	151	VTISCSGSTS	NIGRNSVFWH	QQLPGTAPKV	LISSDNQRPS	GVSDRFSGSD	84
		201	SGTSASLVIS	RLRFEDEGDY	YCAAWDDSL	AYVFGSGTKL	TVLGAAA	
		1	AEVKKPGSSV	RVSCKASGDT	FSYNAINWVR	QAPGQGLEWM	GGIIPMGFTA	
		51	KQAQKFQGRV	TFTADESTST	AYMELTRLRS	EDTAMYYCAR	RGSYSNYERG	
		101	YYYHMDVWQ	GTLTVTVSSGG	GGSGGGGGG	GGSAQSVLTQ	PPSASGAPGQ	
scFv13	15	151	RITISCSGST	ENIGRNYVDW	YKQLPGTAPK	LFTYKNDQRP	SGVPDRFSGS	85
		201	KSGTSASLV	SGLRSEDEAD	YYCLTWDDSL	SGPVEFGGTK	LTVLGAAA	
		1	LQESGPGLVK	PSGTLSTLCA	VSGGSINNNN	WWSWVRQPPG	KGLEWIGELY	
		51	QSGSTNYNPS	LKSRVTISVD	KSNQFSLKM	SSVTAADTAV	YYCARLNNWH	
		101	GPYYGMDVWG	RGTLLTVTVSSG	GGSGGGGGG	GGSAQSVLT	QPPSASGTPG	
		151	QRTVISCSSG	SSNIGSNFVY	WYQQLPGTAP	KLLIYRNNQR	PSGVPDRFSA	
		201	SKSGTSASLA	ISGLRSEDEA	DYYCAAWDDR	RVVFGGGTKL	TVLGAAA	

Fig. 10

scFv14	16	1 51 101 151 201	VQLQSGPGL VKPSETLSLT CTVSGGPVAS SSYYWGFIRQ PPGKGLEWIG SIYDGGYTY SPILKSRATI SEDTSKNQVS INLTSVTAAD TAVYCAKDP GSLSAFWGQ TLVTVSSGG GSGGGSGGG GSALDIQLTQ SPSSLSASVG DRVTITCRTS QRISSYLWY QQKPKAPKL LIYAASLQGS GVPDRFSGG SGTDFTLTIS SLQPEDEATY YCQQSSTPI TEGQGTREI KRAAA	86
scFv15	17	1 51 101 151 201	LLESGGLVQ PGSLRLSCA ASGTFESSYA MSWVRQAPGK GLEWYSAISG SGGSTYYADS VKGRFTISRDN NSKNTLYLQM NSLRAEDTAV YYCARDWRWQ QFGWEDPWG RGLTVTVSSG GSGGGSGGG GGSALDVVM TQSPATLSVS PGERVTLSR ASQSVGSKLA WYQKPGQAP RLLIFGTSTR ASGIPARFSG SGSGTEFTLT ISSLQSEDEFA VYCCQYNNW PPYTEGQGTK VEIKRAAA	87
scFv16	18	1 51 101 151 201	AEVKKPGDSV KVSCKASGYR FETYGFWSVR QAPGQGLEWM GWINTYNGKT NYAQKEQGRV TMTTDTSTST AYMELRSLRS DDTAVYFCSR AEDDSRGYWN HYFSDYWGRG TTVTVSSGG GSGGGSGGG GSAQSVLTQ PSASGTPGQR VTISCSGSS NIGSNVYVWY QQLPGTAPKL LIHKNRRPS GVPDRFSGSK SGTSASLAIS GLRSEDEADY HCAAWDDSL AVFEGGGTKV TVLGAAA	88
scFv17	19	1 51 101 151 201	LESGGLVQPG GGSRLSCAA SGTFESSYAM SWVRQAPGKE LEWYSAISGS GGSTYYADSV KGRFTISRDN SKNTLYLQMN SLRAEDTAVY YCARDWRWQ FGWEDPWGR GTMTVTVSSG GSGGGSGGG GSALETTLT QSPGTLSLSP GDRATLSRA SHSVHNHLA WYQNPQAP RLLIFGASSR AAGLPDRFSG SGSGTDEFTLT ISRLEPEDEFA SYCCQYQCSPP RRTFGQGTKV EIKRAAA	89
scFv18	20	1 51 101 151 201	KPGSSVRVS CKAPGTFGN SAISWVRQTP GQGLEWMGGI IPNFTTANYA QKFGQGRVTIT ADKSTTTAHM ELSSLRSEDY AVYICARGGL GREFDGPSEH SYMEVWVGK TLVTVSSGG GSGGGSGGG GSAQSVLTQ PAASGTPGQR VTISCSGSS NIGSNVYVWY QQLPGAAPKL LIYRNQRP GVPDRFSGSK SGPSASLAIS GLRSEDEADY YCAAWDDSL GPFEGGTKL TVLGAAA	90
scFv19	21	1 51 101 151 201	VQLVQSGAEV KPGSSVKVS CKASGTFSS DAISWVRQAP GQGLEWMGRI IPLINIPNYA QKFGQGRVTIT ADKSTTTAHM ELTSLRFEDA AVYICARVNN WNAFDQWGRG TLVTVSSGG GSGGGSGGG GSALSSELTQ DPAVSVALGQ TVRITCQGD LTSYAAWYQ QKPGQAPLLV FYGDKRPSG IPERFSGSS GNIASLTITG AQAEDEGDEF CSSRDSGGYR FVFCAGTKLT VLGAAA	91
scFv20	22	1 51 101 151 201	KPGSSVKVS CKASGTFSS YAISWVRQAP GQGLEWMGGI IPVFGTANYA QKLGQGRVTIT ADDSMTTVYM ELSSLTSEDY GYVYCARDLM RLARRDEYYY YVMDVWQGT MVTVSSGGG GSGGGSGGG SAQSVLTQPP AASGTGQKI TISCSGSSN IGNYVYVWY QFPGAAPHV IYNNQRPSP VPDREFSGSKS GTSASLAIS GLRSEDEADY CSTWDDTSLG YIFGVGTKV VLGAAA	92
scFv21	23	1 51	QPGGSLRLSC AASGTFESSY AMSWVRQAPG KGLEWYSAIS GSGGSTYYAD SVKGRFTISR DNSKNTLYLQ MNSLRAEDTA VYCARDWRW QQEGGWEDPW	

Fig. 10

10/539402

			101 GQGLTVVSS GGGSGGGGS GGGGALSSE LTQDPVAVVA LGQTVRITCQ 151 GDNLRFSAS WYQLKPGQAP VLVIYKNNR PSGIPDRFSA SSSGNTASLA 201 ITGALAEDEA DYICNSRDSS GNPVFEVGTG KTVVLGAAA	93
scFv22	24		1 SSVKVSCKIS GGNLRLTVT WVRQAPGQGL EWWGRILPDS VNQVVKFQRR 51 LKLTSDTSTR TAYLELRSLK SEDTAVIYCA ASSKIGFQVG ELDYWGRTGL 101 VTVSSGGGS GGGSGGGGS AQSVVTQPPS ASATPGQRTV ISCSGSSNI 151 GRNYYVYQQ VPGTAPQLLV YNNQRPSGV PDRFSGSKSG TSASLGISGL 201 RSEDEADYYC STWDDSLSP VFGGTKLTV LGAAA	94
scFv23	25		1 TFSSYAMSWV RQAPGKLEW VSAISGGGS TYADSVKGR FTISRDNSKN 51 TLYLQMSLR AEDTAVIYCA RRRRRERSIN MIRGVRPQVD DSGMDVWGRG 101 TLVTVSSGG GSGGGSGGG GSALSIVLTQ PPSASGTPGH RVTISCSGSS 151 SNIGSNVYVW YQQLPGTAPK LLIYRNQRP SGVDRFSGS KSGTSASLAI 201 SGLRSEDEAD YYCAWDDTL SGVLEGGGK LTVLGAAA	95
scFv24	26		1 YAMSWVRQAP GKLEWVSAI SSGSGSTYYA DSVKGRFTIS RDNSKNTLYL 51 QMNSLRAEDT AVYYCARNTG KGITLVRGVY QDCDRSSTS RMDVWGQGL 101 VTVSSGGGS GGGSGGGGS AQAVLTQPS ASGTPGQRTV ISCSGTSNI 151 GRNYYVYQQ LPGTAPKLLI YRNKRPSGV PDRFSGSKSG TSASLAI 201 RSEDEADYYC AAWDDSLSG VFGGTKLTV LGAAA	96
scFv25	27		1 GLVQPGSPR LSCAASGTFE SSYAMSWVRQ APGKLEWVS AISGGGSTY 51 YADSVKGRFT ISRDNSKNTL YLQMSLRAE DTAVIYCAKD MGYSYGYGTR 101 GLEDYWGRTV MVTVSSGGG SGGSGGGGS SAQSVVTQPP SASGAPGQRI 151 TISCSGSTEN IGRNYYVYVW YQQLPGTAPKLE IYKNDQPSG VPDREFSGKS 201 GTSASLVVSG LRSEDEADYY CLTWDDSLSG PVFEGGKTV VLGAAA	97
scFv26	28		1 EGGGLVQPG GSLRLSCAAS GTFESSYAMS WVRQAPRGL EWSAISGSG 51 GSTYYADSVK GRTISRONS KNTLYLQMS LRAEDTAVIY CARDNRWQOE 101 GGWEDEWGRG TTVTVSSGG GSGGGSGGG GSALETTITQ SPATLSVSPG 151 DRATLSCRAS QSIGGNLAWY QOKPGQPPRL LIFGASTRAS GTPARFSGSG 201 SGTEFTLTIS SLOSEDFAVY YCQYNNWPP WTFQGQTRLE IKRAAA	98
scFv27	29		1 QPGSLRLSC AASGTFESSY AMSWVRQAPG KGLEWVSAIS GSGSTYYAD 51 SVKGRFTISR DNSKNTLYLQ MNSLRAEDTA VYICAKGDGV VAGTYYIYVG 101 MDVWGRGTTV TVSSGGGGSG GGGSGGGGS QSVLTQPPSA SGAPGQRITI 151 SCSGSTENIG RNYYVYVW YQQLPGTAPKLE IYKNDQPSG VPDREFSGKS 201 SASLVVSGLR SEDEADYYCL TWDDSLSGEV FGGTKLTVL GAAA	99
scFv28	30		1 ASGEGINGYE MHWVRQAPGQ RLEWLGRINA AIGDTIYSRE FQDRVSI TRD 51 MSANTVYMEM SRLREEDTAV YYCVRFHWR HCNSATCQPP EDHWKGTGLV 101 TVSSGGGGSG GGGSGGGGS LSSELTQDPA VSVALGQTVR ITCQDLSLRY 151 YSASWYRQKP GQAPVIVMYG NTRRPSGIPD RISGSSGNT ASLTISGAQA	100

Fig. 10

scFv29	31	201	EDEADYCN S RDSSGNHLVF GGGTKLTVLG AAA	101
		1	VQPGGSLRLS CAASGTFSS YAMSWVRQAP GKGLEWVSAL SGSGGSTYYA	
		51	DSVKGRFTIS RDNSKNTLYL QMNSLRAEDT AVYYCARDHR SGRGGSYLL	
		101	RPLDYWGQGT MVTVSSGGGG SGGGGGGGG SALPVLTPPP SASGTPGQRV	
		151	TISCSGSSSN IGRNIVVYVYQ QLPGTAPKLL IYRNNLRPSG VPDRESGSKS	
scFv30	32	201	GTSASLAISG LRSEDEADY CAAWDDTLISG VVEGGGTKLT VLGAAA	102
		1	EVKPGASVK ISCKASGTFE TSYLFHWVRQ APGQRLWVMG WINAGNGNTK	
		51	YSPKFGQGRVT LTGDTSTSTT YMELSLTSE DTAVYYCARD QVFYESGSYY	
		101	IRPSFDFWGR GTLVTVSSGG GSGGGGGGGG GGSIDIQMTQS PSTLSASIGD	
		151	RVTITCRASE GIYHFLAWYQ QKPGKAPKLL IYKASSIASG APSRFSGSGS	
scFv31	33	201	GTDFLTISS LQPDDEFATY CQOYSNYPLT FGGGTKLTIV LGAAA	103
		1	VRPGGSLRLS CAASGETFDD YGMSWVRQAP GKGLEWVSGI NWNGSGTGXA	
		51	DSVKGRFTIS RDNAKNSLYL QINSLRAEDT AVYYCARRRY ALDYWGRGTM	
		101	VTVSSGGGGG GGGGGGGGGG ALSSELTQDP ATVSVALGQT VRITCQGDLS	
		151	DKYYATWYQQ KPGQAPLLVF FSENRPRPSGI PDRFSGSNSG NTASLTITGA	
scFv32	34	201	QAEDEADYYC NSREIGTNRI LFGGTKLTIV LGAAA	104
		1	LVQPGGSLRL SCAAAGFTES TFEMNWVRQA PGKLEWVSYS ISGSGHAIYY	
		51	ADSVKGRFTI SRDNANNSLY LQMNSLTAED TAVYYCAREK YQLLLGKYDY	
		101	GMDVWGRGTT VTVSSGGGGG GGGGGGGGGG ALPVLTPPP ASGTPGQRTV	
		151	ISCSGSSSNI GSNTLNWYQQ LPGTAPKLLI YSNDQRPSGV PDRFSGSKSG	
scFv33	35	201	TSASLAISGL QSEDEADYYC AAWDDSLNGW VFGGTKTVTV LGAAA	105
		1	RASGGTSSSS AFSWVRQAPG QGLQWGGII PLFGAANYAQ KVRAGLTITA	
		51	DESTGTSYMK LENLQSDDTA VYFCATNGQT RSPPGYIYGM DVWGRGTLVT	
		101	VSSGGGGGGG GSGGGGGGSAQ SVLTQLPSAS GAPQIRITIS CSGSTENIGR	
		151	NYVDWYKQLP GTAPKLFYK NDQRPSGVPG RFSGSKSGTS ASLVVSGLRS	
scFv34	36	201	EDEADYYCLT WDDSLSGPVF GGGTKLTVLG AAA	106
		1	ACKGFGYTFV DHGISWVRQA PGQGLEWVMG INTDGHNTNY AQKTQARLTM	
		51	TTDASINTSY MELRSLTSDD TAVYYCARGG ETRTAHRSSR ATNDNGYPY	
		101	SSGLDVWGQG TLVTVSSGGG GSGGGGGGGG GSAQAVLTQP SSASGTPGQR	
		151	VTISCSGSSS NIGSNVYVYVY QQLPGTAPKL LIYRNNQRPS GVPDRFSGSK	
scFv35	37	201	SGTSASLAIS GLRSEADY YCAAWDDSLS GWVEGGGTKL TVLGAAA	107
		1	PGASVKVSKC ASGYTFTSY MHWVRQAPGQ GLEWMMGIINP SGGSTSYAQK	
		51	FQGRVTMTRD TSTSTVYNEL SSLRSEDYAV YYCARGSGAR MVRGVIIDPY	
		101	GMDVWGRGTL VTVSSGGGGG GGGGGGGGGG AQSVLTQPPS ASGTPGQRTV	
		151	ISCSGSSSNV GSNVSWYVYVY FPGTAPKLLI YRNNQRPSGV PDRFSGSKSG	
scFv35	37	201	ISASLAISGL RSEDEADYFC VAWDDSLREY VFGTGTCTVTV LGAAA	107
		1	ISASLAISGL RSEDEADYFC VAWDDSLREY VFGTGTCTVTV LGAAA	
		51	ISASLAISGL RSEDEADYFC VAWDDSLREY VFGTGTCTVTV LGAAA	
		101	ISASLAISGL RSEDEADYFC VAWDDSLREY VFGTGTCTVTV LGAAA	
		151	ISASLAISGL RSEDEADYFC VAWDDSLREY VFGTGTCTVTV LGAAA	

Fig. 10

scFv36	38	1 51 101 151 201 ESGGGLVQPG GSLRLSCAAS GFTFSSYAMS WVRQAPGKGL EWVSAISGSG GSTYADSVK GFTISRDN KNTLYLQWNS LRAEDTAVYY CAKGGTRVTH RGGEDIWGRG TMVTVSSGGG GSGGGSGGGG GSALPVLTOP PSASGAPGQR ITISCSGSTF NIGRNYVDWY KQLPGTAPKL FIYKNDQRPS GVPDFRFSGSK SGTSASLVVS GLRSEDEADY YCLTWDDSL S GPVEGGGTKL TVLGAAA	108
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Fig. 10

Ref.:	SEQ ID No.	Nucleotide Sequence
scFv1	3	<p>1 GAGGTCCAGCTGCAACAGTCTGACACCTGAGTGGTGAAGCTGGGGCTTTAGTGAAGATATCCTGCAAGG</p> <p>71 CCTCGGATACACCGTCAACAGTACGATATAAACTGGGTGAAGCAGAGGCGCTGGACAGGACTTGGAGTG</p> <p>141 GATTGGATGGATTATCCTGGAGATGGTACTAAGTACAATGAGAATTCAGGGCAAGGCCACACTG</p> <p>211 ACTGTAGACAAATCCTCCACACAGTCTACATGACGCTCAGCAGCCTGACTTCTGAGAACTCTGCACTCT</p> <p>281 ATTTCTGTGCAAGAGGTGTAATAACTTTGACTACTGGGGCAAGGCCACTCTCACAGTGTGACAGG</p> <p>351 TGGAGCGGTTCAAGCGGAGGTGGCTCTGGCGGTGGCGAAGTGCACTCGACATTTGTGATGACACAGTCT</p> <p>421 CCAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGGTCACCTGCAAGGCCAGTCAGAATGTGGCTA</p> <p>491 CTAATGTAGCCTGGTATCAACAGAAACCCAGGGCAATCTCTAAACCACTGACTTACTCGGCATCCTTCCG</p> <p>561 GTCCAGTGGAGTCCCTGATCGCTTCACAGGAGTGGATCTGGACAGATTTCACTCTCACCATCAGCAAT</p> <p>631 GTGAGTCTGAAGACTTGGCAGAGTATTTCTGTACGCAATATAACAGCTATCCGTACACGTTCCGAGGGG</p> <p>701 GGACCAAGCTGGAATAAAAGCGCGCAGTGGCGGTGCCGTATCCAGATCCGCTGGAACCGCGGTG</p> <p>771 GCGCGAAGCGCTTGAGCCACCCGAGTTCGAAAATAA</p>
scFv2	4	<p>1 GAGGTGCAGCTGTGGAGTCTGGGGGAGGCTTGGTACAGCTGGGGGTCCCTGAGACTCTCTGTGCAG</p> <p>71 CCTCTGGATTACACTTTAGCAGCTATGCCATGAGCTGGTCCGCCAGGCTCCAGGAAGGGGTGGAGTG</p> <p>141 GGTCTCAGCTATTAGTGGTGTGTGTGATGACACATATACGACAGACTCCGTGAAGGCCCGTTTCAACATC</p> <p>211 TCCAGAGACAAATCCAAGAACACCGCTGTATCTCAATGAACACGCTGAGAGCCGAGACACGCGCGTGT</p> <p>281 ATTACTGTGCGGAGACTCGGGCTACAGAGGACCCCGCCGAGAGGGCCCGAGTAAATTTCTCCTA</p> <p>351 CTACGGTCTGGAGCTCTGGGGCGGGGACACGGTCACTCCGTCTCGATGGAGGCGCGGTTTCAAGCGGA</p> <p>421 GGTGGCTCTGGCGGTGGCGAAGTGACAGGCTGTGCTGACTCAGCCGTCTCAGGCTCTGGGACCCCGG</p> <p>491 GGCAGAGGCTCACCATCTCTGTCTGGAAGCAACTCCAACATCGGACGCAATTTATGTATTTCTGTACCA</p> <p>561 GCAGTCCCAGGAACGGCCCCAAATCTCATCTACAGGAACAATCAGCGGCCCTCAGGGTCCCTGAC</p> <p>631 CGATTCTCTGGTCCAAGTCTGGCACATCAGCCTCCCTGGCCATCAGTGGGCTCCGTCGAGGATGAGG</p> <p>701 CTGATTATTACTGTGATCATGGGATGACAGCCTGACTTGGGTGTTGGCGGAGGACCAAGGTCACCGT</p> <p>771 CCTAGGTGCGCGCAGGTGCGCGGTGCCGTATCCAGATCCGCTGGAACCGGTGGGGCCCGCAAGCGCT</p> <p>841 TGGAGCCACCCGAGTTCGAAAATAA</p>
scFv3	39	<p>1 GGGCCTCAGTGAAGGTCTCTGCAAGACTCTGGATACACCTTCAATCGCCCTATTATATTCATTGGGTGGC</p> <p>71 ACAGGCCCTTGACAAAGGCTTGAGTGGATGGACGGATCAACCTAACACTGGTGGCATAAACCTTGCA</p> <p>141 CAGAAGTTTCAGGGCAGGTCACCGTGACAGGACAGCTCCATCAGCACAGCCACATGGAGCTGAGTA</p> <p>211 GGCTGAGCTCTGACGACACCGCCGATATACTGTGCGAGAGAGAGGATCGTACAGCTGGTCTGAGGAA</p> <p>281 CCGTGGATGTGACTGCGGTGGAATGGACGCTCTGGGGCCGGGAAGTGCAGTCTGTCTGACGACGCGCCCT</p> <p>351 GCGGGCGGTTCAAGCGGAGGTGGCTCTGGCGGTGGCGAAGTGCAGTCTGTCTGACGACGAGCGCCCT</p> <p>421 CAATGTCTGGACCCCGGACAGAGGTCACCATCTCTGTTCTGGAGGAGGTCACCAATTTGGAAGGAA</p> <p>491 TTATGTATCTGGTACCAAGAGTCCAGGAACGGCCCCCAACTCTCATTTATAGGAATATTAACCGG</p> <p>561 CCCTCAGGGGTCCCTGACCGATTCTCTGCCTCCAAGTCTGGCACTCAGCCTCAGCTCCCTGGCCATCAGTGGAC</p>

Fig. 11



			631 TCCGGTCCGAGGATGAGGCTGATTATTACTCGGCAACGCTGGGATGACACTCTGAGTGGGACTTGGGTGTT 701 CGCGGAGGGACCAAGCTGACCGTCTAGGTGCGGCCGC
scFv4	40		1 CTGTTGGAGTCTGGGGGAGGCTTGGTACAGCTGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGAT 71 TCACCTTTAGCAGCTATGCCATGAGCTGGTCCGCCAGGCTCAGGGAAGGGGCTGGATGGGTCTCAGC 141 TATTAGTGGTAGTGGTAGCACATACTACGCAGACTCCGTGAAGCGCGGTTACCATCTCCAGAGAC 211 AATTCGAAGAACACGCTGTAICTGCAATGAACACCTGAGAGCGGACACGCGCTGTATTACTGTG 281 CGAGAGTGGGGGCGGATATGATAGTAGTACCGCTTTGACTCTCTGGGCGGGGACAAATGGTCACCGT 351 CTGAGTGGAGGCGCGGTTACGGCGGAGTGGCTCTGGCGGTGGCGGAAGTGCACTTCTCTATGAGCTG 421 ACTCAGCCACCCCTCAGTGTGGTGGCCCCAGGAGAGAGCGGCCACAAATACCTGTGGGGACGCGACCTTG 491 GCTCAAAAGTTGTGATTGGTATCAGCAGAGCCAGGCCAGGCCCTACATTGGTCATTATTATGATTC 561 CGTCGGCCCTCGGGGTCCCTGAGCGATTCTCTGCCCAACTCTCGGTGTGGGCCACCCCTGACCGTC 631 AGCAGGTCGAAGCCGGGATCAGGCCGACTATTATTGTCAAGGTGGGATAGAGTAGTGACCAATTATG 701 TCTTCGGAACCTGGGACCAAGCTGACCGTCTAGGTGCGGCCGC
scFv5	41		1 CAGCTGTTGGAGTCTGGGGAGGCTTGGTACAGCCTGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTG 71 GATTACCTTTAGCAGCTATGCCATGAGCTGGTCCGCCAGGCTCAGGGAAGGGCTGGATGGGTCTC 141 AGCTATTAGTGGTAGTGGTAGCACATACTACGCAGACTCCGTGAAGCGCGGTTACCATCTCCAGA 211 GACAAATCCAAGAACACGCTGTATCTGCAATGAACAGCTGAGAGCGGACACGCGCTGTATTACT 281 GTGCGAGATTGGAGATGGCAACAATTTGGGGCTGTTCGACCCCTGGGGCCGAGAACCCCTGGTCAC 351 CGTCTGAGTGGAGGCGCGGTTCAAGCGGAGGTGGCTCTGGCGTGGCGGAAGTGCACTTGAACGACA 421 CTCACGCAGTCTCTGCCACCTGTCTGTCTCCAGGGAACAGCACCCCTCTCTGCAGGGCCAGTC 491 AGAGTGTAGGAACAACCTTAGTCTGGTACAGCAGAAAGTTGGCCAGGCTCCAGACTCCTCATCTTTGG 561 TGCATCCACCGAGGCCAGTGGCATCCACAGAGTTCACTGGCAGTGGGTCTGGGACAGACTTCACTCTC 631 ACCATCACCAACTGGAGCTGAGGATTTGCACTGTATTACTGTCAAGCGGTATGGTGGTTTCCCGATCA 701 CCTTCGGCCCAAGGACACGACTGGAGATTAAACGTGGGCCCGC
scFv6	42		1 CAGCTGGTGCAGTCTGGGGAGGCTTGGTGCAGCCCGGGGGTCCCTGAGACTCGCCTGTGAAGCCTCTG 71 GATTCAAGTTTAGCAGCTATGGCATGAGCTGGTCCGCCAGGCTCCAGGGAAGGGCTTGAGTGGGTCTC 141 TTCCATGAGCGATAGTGGTGCCAATACATACTACGCAGACTCCGTGAAGCGCGGATTACCATCTCCAGA 211 GACAATGCCAAGAAGATGTTGATCTACAAATGAGCAGCCTGAGAGCGGAGGACGCGCGTGTATTACT 281 GTGCGACTCTCTTAGGGGAAGTGGTACGTTCTGTCATGGGGCAGGGAACCCCTGGTCAACCGTCTGAG 351 TGAGGCGCGGCTTCAGGCGGAGGTGGCTCTGGCGTGGCGGAAGTGACAGGCTGTGTGACTCAGCCG 421 TCCTCAGCGTCTGGGACCCCGGCGAGAGGCTCATCTCTTGTCTTGAAGCAGCTCCAACATCGCAA 491 GTAATTATGTATCTGTTACAGCAACTCCAGGAAGCGGCCCAAACTCTCATCTCTAAGAAATAGTCG 561 GCGGCCCTCAGGGGTCCCTGACCGATTCTCTGGTCTCAAGTCTGGACCTCAGCCTCCCTGGCCATCAGT 631 GAACTCCGTCGAGGATGAGGCTGATTATTACTGTGCAGCATGGGATGACAGGCTGAGTGGTCCGGCAT 701 TCGGCGGAGGACCAAGCTGACCGTCTAGGTGCGGCCGC
scFv7	43		1 AAGAAGCCTGGTCTCTGGTGAAGTCTCTCTGCAAGCTTCTGGAGGCACCTTCAGCAGTTATGCTATTA 71 GTTGGGTGCGACAGGCCCTGGACAAGGCTTGAGTGGATGGGAGGATCATTCCTATGTCTGGTACACC

Fig. 11

		<p>141 A A A C T A C G C A C A G A A G T T C C A G G A C A G A G T C A C G A T T A C C G C G G A C A A T C C A C G A G C A C A G C C T A C A T G</p> <p>211 G A G C T G A G C A G C C T G A G A T C T G A G G A C A C G C C G T G T A T T A C T G T G C A G G G G G G C G T A C G T T G A C T</p> <p>281 T C G G T C G T G C C C T T C G T A C C A C T A C T A C A T G G A C G T C T G G C G G A G T G C A C A G T C T G T T G A C G C A G</p> <p>351 G A G T G G A G G C G C G G T T C A G C G G A G T G C T T G C G G T G G C G G A G T G C A C A G T C T G T T G A C G C A G</p> <p>421 C G C C C T C A G C G T C T G G A C C C C G G A C A G A G G T C A C C A T C T C T G T T C T G G G C C A C C T C C A A C A T C G</p> <p>491 G A A G G A A T T A T G T T A C T G G T A C C A C C A A C T C C A G G A C G C C C C A A G C T C T C A T C T A T A G G A A T G A</p> <p>561 T C A G C G T C C C T C A G G G T C C C T G A C C G A T T C T G G G T C C A A G T C T G G C A C C T C A G C C T C C C T G G C C A T C</p> <p>631 A G T G G C C T C C G G T C C G A C G A T G A G G T G A T T A T T A C T G T G C T G C T G G G A C G A C A C C T G A G T G G T C T A T</p> <p>701 T T T T C G G C G G A G G A C C A G C T G A C C G T C C T A G G T G C G G C C G C</p>
scFv8	44	<p>1 G C C A G G T G C A G C T A C A G A G T G G G C C C A G G A C T G T G A A G G C T T C G G A G A T C C T G T C C C T C A C T G C A</p> <p>71 C T G T C T C T G T A G C T C C C T C A G C A G T G T G G T T A C T A C T G A G C T G G A T C C G C A G C A C C C A G G A A G G G</p> <p>141 C C T G G A G T G G A T G G G T A C A T C C A T T A C A G T G G A G C A C G T A C T A C A A C C C G T C C C T C A A G A G T C G A G T T</p> <p>211 A C C A T A T C A G T A G A C A C G T A A G A A C C A G T T C T C C T G A A G C T G A G C T C T G A C T G C C G G A C A C A C G G</p> <p>281 C T G T G A T T A T T G T G C G A G A T T C C G T T G A G A T T T G A T G T T T G A T G T C T G G G C C A A G G C A C C C T G G T</p> <p>351 C A C C G T C T C A G T G G T G G A G C G G T T C A G C G G A G T G G C A G C G G G G T G G G G A T C G G A C A T C C A G A T G</p> <p>421 A C C C A G T C T C C T T C C A C C T G T C T G C A T C T A T T G G A G A C A G A T C A C C A T C A C C T G C C G G C C A G T G A G G</p> <p>491 G T A T T A T C A C T G G T T G C C T G G T A T C A G C A G A A G C A G G A A G C C C T A A A C T C C T G A T C T A T A A G G C</p> <p>561 C T C A G T T A G C C A G T G G G C C C C A T C A A G G T T C A G C G C A G T G G A T C T G G A C A G A T T C A C T C T C A C C</p> <p>631 A T C A G C A G C C T G A G C C T G A T G A T T T T G C A A C T T A T T A C T G C C A A C A A T A T A G T A A T T A T C C G C T C A C T T</p> <p>701 T C G G C G G A G G A C C A A G C T G G A G A T C A A A C G T G C G G C G C</p>
scFv9	45	<p>1 C T G A G C T G A A A A G C C T G G G T C C T C G G T A A A G G T C T C C T G C A A G G C T C C T A G A G G C A C C T T C A A C A G T T A</p> <p>71 T G C T C T C A A C T G G G T C G A C A G C C C C T G G A C A A G G C T T G A G T G G A T G G G A G G A T C A T C C C T A T T T T T</p> <p>141 G G T A G T G C A A A T T A C G A C C G A A G T T C C A G G G C A G A T C A C C A T T A C C G G G A G A A T C C A C G A C C A C A G</p> <p>211 C C T A C T T G G A G C T G A C A G C C T G A G A T C T G A G G A C A C G C C C G T A T A T T A C T G T G C G C G A G C T C C C A T T T</p> <p>281 G G A T T A C G T T G G A G A C T A T A A T T A C T A C T T T G A C A A C T G G G G C A A A G G A C A A T G G T C A C C G T C T C G</p> <p>351 A G T G A G G C G C G G T C A G C G G A G G T G G C T C T G C C G T G C G G A G T G C A C T T T C T T C T G A G T G A C T C</p> <p>421 A G G A C C C T G C T G T C T G T G C C T T G G A C A G A C A C A G T C A G G A T C A C A T G C C A G G G A G A C A G C C T C A G A A G</p> <p>491 T T A T T A T G C A G C T G G T A C C A G A A G C C A G A C A G C C C C T G C C T T G C A T C T A T G T A A A A A T A G T</p> <p>561 C G G C C C T C A G G G A T C C C A G A C C G A T T C T G C C T C C G A C T C A G G A A C A C A G C T T C C T T G A C C A T C A C T G</p> <p>631 G G G C T C A G G G A A G A T G A G G C T G A C T A T T A C T G A A C T C C C G G A C A G A A G T G G T A A C C G C G T G G T C T T</p> <p>701 C G G C G A G G A C C A A G C T G A C C G T C C T A G G T G C G G C G C</p>
scFv10	46	<p>1 T C C C T G A G A C T C T C C T G T G C G G C C T C T G G A T T C A C C T T A G C A G C A T T A G C A T G C A G C T G G G T C C G C C A G G</p> <p>71 C T C A G G A A G G G C T G G A G T G G G T C A G C T A T T A G T G G T A G T G G T A G C A C A T A C T A C C A G A C T C</p> <p>141 C G T A A G G C C G G T T C A C C A T C T C A G A G A C A A T T C C A A G A C A C C G T G T A T C T G C A A A T G A C A G C C T G</p> <p>211 A G A C C G A G A C A C G G C C G T A T T A C T G T G C G A G G G G T A C G T A T C A C T A T A C C A T G A C A G C C G T G</p> <p>281 G T G T A C C G C C A A T A T A T A A C C A C G T T T G G A C C T C T G G G G A G G G G A C C A C G G T C A C C G T C T C G A G</p>

Fig. 11

scFv11	47	351	TGAGGGGGGGTTCAGCGGAGGTGGCTCTGGCGTGGCGGAAGTGCACAGGCTGTGCTGACTCAGCCG
		421	TCCTCAGCGTCTGGACCCCCGGGACAGAGGTACCATCTCTTTGTTCTGGAAGAGCTCCAAATCAGGAA
		491	AGAAATTATGTATCTAGTATCAGAGTCCAGGACCGGCCCCAAACTCTCATCTATAGGAATAATCA
		561	GGGGCCCTCAGGAGTCCCTGACCGATTCTCTGGCTCAAGTCTGGACCTCAGCCTCCCTGGCCATCAGT
		631	GGCTCCGGTCCGAGGATGAGGCTGATATTATTGTGCGGCACGGGATAACGGGCTGAGTGCTTATGTGA
		701	TATTCGGCGGAGGACCAAGCTGACCTCTAGTGGGCGCGG
		1	AGGTGAAAAGCCCCGGGAGTCTCTGAGATCTCTGCAAGGTTCTGGATACAGCTTTCCCAACTACTG
scFv12	48	71	GATCGCTGGTGGCGCCAGATGCCGGGAAAGCCCTGGAGTGGATGGGATCATCTATCTCTGCTGACTCT
		141	GATACTATATACAGCCCGCTCTCCGAGGCCAGTCAACATCTCAGCCGACAACTCCATCAGCACCGCCT
		211	ACCTGCAGTGGAGCAGCCTGAAGCCTCGGACACCGCATGTATTACTGTGCGAGACAGGGTGTAGTGG
		281	TGGTAAATGCTACGAGAAATGTATGCTTCTGATATCTGGGCAAGGGAAACCTGGTCAACGCTCGAGT
		351	GGAGCGCGGTTCAGCGGAGGTGGCTCTGGCGTGGCGGAAGTGCACCTTCTATGAGTCACTCAGC
		421	CACCTCAGCGTCTGGGACCCCGGAGAGGTCACCATCTCTTGTCTGGAAGCAGTCCCAACATCGG
		491	AAGGAATTCTGTATTTTGGCACCAAGAGTTACAGGAACGGCCCCCAAGTCTCATCTCTTCTGATAAT
scFv13	49	561	CAGGACCTCAGGGTCTCTGACAGATTCTCTGGTCCGACTCTGGCACCTCAGCCTCCCTGGTCAATCA
		631	GTGCTCCGGTTCGAAGATGAGGTGATTACTACTGTGAGCATGGGATGACAGTCTGAGTGCTTATGT
		701	CTTCGGAAGTGGGACCAAGCTGACCGTCTAGTGGGCGCGG
		1	GGGTGAGTGAAGAAGCTGGTCTCGGTGAGGTCTCTCTCAAGGCTTCTGGAGACACCTTCAGCTA
		71	CAATGCTATCAACTGGTTCGACAGGCCCTTGCAAGGGCTTGAAGTGGATGGAGGGATCAATCCCTATG
		141	TTTGGTACAGAAAGCAGACAGAGTTCAGAGCAGAGTACAGTTTACCGGGACGAATCCACGAGCA
		211	CAGCCTACATGAGTTGACTAGTATCAGATCCGAGACACGGCATGTATTACTGTGCGGACGGGCTC
scFv12	48	281	GTACAGTAATTACGAGGGGTATTACTATCAGATGGACGCTGCGGGCCAGGAACCTGGTCAACCTC
		351	TCGAGTGGAGGGCGGTTCAGCGGAGGTGGCTCTGGCGTGGCGGAAGTGCATGCCCTGTGCTGACTC
		421	AGCCACCTCAGCGTCTGGGGCCCCCGGCGAGAGATCAACATCTTGTTCGGAAGCACCTTCAACAT
		491	CGGGAGAAATTATGTTGACTGTAFAAACAACTCCCGGAACGGGCCCTAAACTCTTCACTATAAGAAT
		561	GATCAGCGACCTCAGGGTCCCTGACCGATTCTCTGGCTCCAACTTGGCACTCAGCCTCCCTGGTCCG
		631	TAAGTGGAATCCGCTCCGAGGATGAGGCTGATTATTACTGTCTGACTTGGGATGACAGCCTGAGTGGTCC
		701	GGTGTTCGGCGGGGGACCAAGCTACCGTCTCTAGTGGGCGCGG
scFv13	49	1	GCTCAGGAGTCCGGCCAGGACTGGTGAAGCTTCGGGGACCTGTCCCTCACTGGCTGTCTCTGGT
		71	GGCTCCATCAACAATAATAATTGTGGAGTTGGTTCGCCACGCCCCAGGAGGGGCTGGAGTGGATTG
		141	GGGAAATCTATCAGAGTGGGAGCACCAACTACACCCGTCCCTCAAGAGTCGAGTCAACATATCAGTAGA
		211	CAAGTCCAAACACCACTTCCCTGAGATGAGTCTGTGACCCCGCGGACACGGCCGTGATTACTGT
		281	GCGAGGCTTAACCTGGAACACCGGCCCTACTACGGTATGGACGCTCTGGGCGAGGGCACCTGGTCAACG
		351	TCTCGAGTGGAGGGCGGTTTCAGCGGAGGTGGTCTGGCGTGGCGGAAGTGCACAGTCTGTGCTGAC
		421	GCAGCGCCCTCAGCGTCTGGGACCCCGGACAGAGAGTCAACATCTCTTGTCTTGGAGCAGCTCCAAC
scFv13	49	491	ATCGGAAGTAATTTTGTATACTGTTACAGAGCTCCCGAGGAGCGGCCCAACTCTCATCTATAGGA
		561	ATAATCAGCGGCCCTCAGGGGTCCCTGACCGATTCTCTGCCTCAAGTCTGGCACCTCAGCCTCCCTGGC

Fig. 41

10/539402

scFv14	50	631 CATCAGTGGGTCGGTCCGAGGATGAGGCTGATTATTACTGTGCGGATGGATGACAGGCGTGTGGTA 701 TTCGGCGAGGACCAAGCTACCGTCTTAGGTGCGGCCGC
		1 GGTGAGCTGACAGAGTCGGGCCAGGACTGGTGAAGCTTCGGAGACCTGTCCCTCACCTGCATGTCTC 71 TCTGGCGGCCCGCTCGCCAGTAGTAGTACTAGGCTTGGGCTTCATCCGCCAGCCCCAGGAAAGGGCTGG 141 AGTGGATTGGGAGTATTATGATGGTGGTACACCTACTACACCCCTCCCTTAAGAGTCAGCTACCAT 211 ATCCTTCGACACGTCCTCAAGAACAGGTCTCCCTGAACCTGACCTCTGTACCCTGGGACACGGCCGTC 281 TATTACTGTGCGAAAGACCCGGGAGTTTTCAGCGCCCTTCCTGGGGCAGGAAACCTTGGTCAACCGTCTCGA 351 GTGAGGCGGCGGCTTCAGGCGGAGGTGGCTCTGGGCTGGGGAAGTGCATTCACCTCCAGTTGACCCA 421 GTCTCCATCCCTCCCTGTCTGGTCTGTAGAGACAGAGTCACCATCCTTGCAGCAAGTCAGGCGATT 491 AGCAGCTATTTAAATTTGGTATCAGCAGAGCCAGGAAAGCCCCAAGCTCCTGATCTATGCTGCATCCA 561 GTTTGCAAGTGGGTCCTCATCAAGTTTCAAGTTCAGTGGCAGTGGTCTGGGACAGATTTCACTCTCACCATCAG 631 CAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAACAGAGTTACAGTACCCCGATCACCTTCGGC 701 CAAGGACACGACTGGAGATTAAACGTGGGCGCCG
scFv15	51	1 CTGTTGAGTCTGGGGAGGCTTGGTACAGCCTGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGAT 71 TCACCTTTAGCAGCTATGCCATGAGCTGGGTCCGCCAGGCTCCAGGGAAGGGTGGAGTGGTCTCAGC 141 TATTAGTGGTACTGGTGGTAGCACATACACGAGTCCGTGAAGGGCCGGTTCACCATCTCCAGAGAC 211 AATTCCAAGAACACGCTGATCTGCAATGAACAGCCTGAGAGCCAGGACACGGCCGTGTATTACTGTG 281 CCAGAGATTGGAGATGGCAACAATTTGGGGTGGTTCGACCCCTGGGCGAGAGCACCTGTGTCAACCGT 351 CTCGAGTGGAGCGCGGTTTCAGGCGGAGGTGGTCTGGCGGTGGGGAAGTGCATTTGATGTGTGATG 421 ACTCAGTCTCCAGCCACCTGTCTGTGTCTCAGGGAAGAGTCAACCTCTCCTGCAGGGCCAGTCAAG 491 GTGTTGGCAGCAAGTTGGCTGGTACAGCAGAACTCCGGGAGGTCCTCCAGGCTCCTCATCTTTGGTAC 561 ATCGACCGGCGGCTGGTATCCAGCCAGGTTTCAGTGGCAGTGGGTCTGGGACAGAGTTCACCTCTCACC 631 ATCAGCAGCCTGCAGTCTGAAGATTTTGCAGTTTATTAAGTGTGACAGATATAATAACTGGCCCTCCGTACA 701 CTTTGGCCAGGGACCAAGGTGGAATCAACGTCGGGCGCCG
		1 GCTGAGGTGAAGAAGCCTGGGACTCAGTGAAGTCTCCTGCAAGCCTCTGTTACAGGTTTGAACCT 71 ATGGTTTCAGCTGGGTGCACAGGCCCTGGACAAGGCTTGAAGGATGGATGGATCAACACTTACAA 141 TGGTAAGACAAATATGCACAGAAGTTCCAGGGCAGAGTCACCAATGACACAGACAGTCCACGAGCACA 211 GCCTACATGGAGTTGAGAGCCTGAGATCGGACGACACGCCGCTGTATTTTGTTCGAGAGTGAAGATG 281 ATAGCAGAGGTTATTGGAACCATTAATCTCCGACTACTGGGGAGGGGACACGGTCAACGCTCTCGAG 351 TGGAGGCGGCGGTTTCAGGCGGAGGTGGCTCTGGCGGTGGGGAAGTGCAGTGTGTGCTGACTCAGCCA 421 CCTCAGCGTCTGGGACCCCGGACAGAGGTCAACATCTCTTGTCTGGAAGCAGCTCCACATCGGAA 491 GTAATTATGTATCTGTTACAGCAGTCCAGGAGGCGGCCCAAACTCCTCATCCATAGNATAATCG 561 GCGGCCCTCAGGGGTCCCTGACCGATTCTCTGGTCCAAAGTCTGGCACCTCAGCCTCCCTGGCCATCAGT 631 GGGCTCCGCTCCGAGGATGAGGCTGATTATCACTGTGACGCTGGATGACAGCCTGAGTGTGTGTGTTT 701 TCGGCGGAGGACCAAGTCAACGCTCTAGGTGCGGCGCCG
scFv17	53	1 TTGGAGTCTGGGGAGGCTTGGTACAGCCTGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCA 71 CCTTAGCAGCTATGCCATGAGCTGGTCCGCCAGGCTCCAGGGAAGGAGCTGGAGTGGTCTCAGCTAT

Fig. 11

141	TAGTGGTAGTGGTAGACATACACTACGAGACACTCCGTGAAGGGCCGGTTACCACTCCAGAGACAAT		
211	TCCAAGAACACCGTGTATCTGCAAAATGAACGCCTGAGAGCCGAGGACAGGCGCGTGTATCTACTGTGCGA		
281	GAGATTGGAGATGGCAACAATTTGGGGCTGGTTTCGACCCCTGGGCGGAGGACATAGGTCAACCGTCTC		
351	GAGTGGAGGCGGGGTTTCAAGCGGAGGTGGCTCTGGCGGTGGCGGAAGTGCATTTGAACAGACACTCAGG		
421	CAGTCTCCAGGACCCCTGTCTTGTCTCCAGGTGATAGAGCCACCCCTCCTGCGAGGCCAGTCAAGTG		
491	TTAGTCACAACCACTTAGCCTGGTACCAGAAAATCCTGGCCAGGCTCCAGGCTCCTCATTTTGGTGC		
561	ATCCAGCAGGGCGCTGGCATCCCTGACAGTTTCAAGTTCAGTGGCAGTGGTGGGACAGACTTCACCTCTCACC		
631	ATCAGCAGACTGGAGCCCTGAAGATTTTGCACTCATATTAATGTAGCAGTATGGTAGCCCCCGGCGGACGT		
701	TCGGCCAAGGACCAAGGTGGAATCAACGTGCGGCGCG		
scFv18	54		
1	GAAGAAGCCTGGGTCTCGGTGAGGTCTCTGCAAGGTCTCTGGAGCACCTTCGGCAACTCTGCTATC		
71	AGCTGGGTGGACAGACCCCTGGACAAGGCTTGAGTGGATGGAGGAATCATTCCTATGTTTACTACAG		
141	CAAACTACGCACAGAAGTTCAGGGCAGGTCAACATTAACCGCGGACAAATCCACGACACACAGCCACAT		
211	GGAGCTGAGCAGCCTGAGATCTGAGGACACGGCCGTCTATTACTGTGCGAGAGGCGGACTGGGACGATTT		
281	TTTGACGGCCCTCCCACTTCTCTACTACATGAAGTCTGGCGTGGGCAAGGAACCTGGTCAACCGTCTCGA		
351	GTGAGGCGGGGTTTCAAGCGGAGGTGGTCTGGCGGTGGCGGAAGTGCACAGTCTGTGCTGACGAGCC		
421	GCCGAGCGCTCTGGGACCCCGGCGAGAGGTCAACATCTCTTGTGGAAGCAACTCCAACATCGGA		
491	AGAAATTAATGTACTGTGATCAGCAGCTCCAGAGCGGCCCCCAAACTCCTCATCTATAGGAATAATC		
561	AGCGGCCCTCAGGGGTCCCTGACCGATTCTCTGGTCCCAAGTCCGGCCCTCAGCTCCCTGGCCATCAG		
631	TGGGCTCCGGTCCGAGGATGAGGCTGATTATTACTGTGACAGCATGGGATGACAGCTGAGTGGCCCTGCA		
701	TTCCGGCGGAGGACCAAGCTGACCGTCTCTAGGTGCGGCGCG		
scFv19	55		
1	AGTCCAGCTGGTACAGTCTGGGGTGAAGTGAAGAGCTGGTGGTCTCGTGAAGTCTCTGCAAGGC		
71	TTCTGGAGGCACTTCAGCAGCGATGCTATCAGCTGGTGGCGACAGGCCCTGGACAAGGACTTGAGTGG		
141	ATGGGAAGGATCATCCCTCTAAATTAATATACCAAACTACGCACAGAACTCCAGGCAGAGTCAAGATTA		
211	CCGCGGACAAATCCACGACACAGCCTACATGGAGCTGACCAAGCTTAAAGATTTGAGGACGCGCGGTGTA		
281	TTACTGTCCGAGTGAATACTGGAACGCTTTGACAGTGGGCGGGGAACCTGGTCAACGTCTCG		
351	AGTGGAGGCGGGTTCAGGCGGAGTGGTCTGGCGGTGGCGGAGTGCATTTCTTCTGAGTGACTC		
421	AGGACCTGTGTCTGTGGCTTGGACAGACAGTCAAGATTACATGCCAAGGAGACACCCCTCACAAG		
491	TTATTATGCGGCTGGTACCAGCAGAAGCCAGGACAGGCCCCCTCTGTCTTCTATGGTAAGACAAAG		
561	CGGCCCTCAGGATCCAGAGCGATTCTCTGGTCCAGCTCAGGAATATTTGCTTCTTGAACCATCAGT		
631	GGGCTCAGGCGGAGGATGAGGTTGACTTTTACTGTAGTCCCGGACAGCAGTGGGTACCGTTTGTCTT		
701	CGGGCTGGGACCAAGCTGACCGTCTCTAGGTGCGGCGCG		
scFv20	56		
1	GAAGAAGCCTGGTCTCGGTGAAGTCTCTGCAAGGTCTCTGGAGCACCTTCACCAAGCTATGCAATC		
71	AGTTGGTGGACAGGCCCTGGACAAGGCTTGAGTGGATGGAGGGTTTCATCCTGTATTTGGCACAG		
141	CAAACTACGCACAGAAGTTGCAGGGCAGAGTCAAGTACCCGCGGAGGATTCATFACCAACAGTGTACAT		
211	GGAGCTGAGTAGCCTGACCTCTGAAGACAGGCGGTGATTACTGTGCGAGAGATCTCATCGGCTGGCC		
281	CGTCGGATGAATACTACTATTACTATGAGAGCTGGGGCCCAAGGACAAATGGTCAACCGTCTCGAGTG		

Fig. 11

scFv21	57	<p>351 GAGCGCGGGTTAGCGGAGGTGGCTCTGGCGGTGGGGAAGTGACAGTCTGTGCTGACTCAGCCACC</p> <p>421 CGCAGCGTCTGGACCTACGGCAGAAAGATCACCATCTCTTGTCTGGAAGCAGTCCCAATATCGGAGTT</p> <p>491 AATTATGTTTACTGGTACCGGCAATCCAGGAGCGGCCCCACGTCGTCACTATAATAATGATCAGC</p> <p>561 GGCCTCAGGGTCCCTGACCGATTCTCTGGCTCCAAGTCTGGACCTCCGCTCCCTGGCCATCAGTGG</p> <p>631 GCTCCGTCAGGAGTGAAGGTGATTATTAATGTTCCACATGGGATGACACCCCTGAGTGGTTATATCTTC</p> <p>701 GGAGTTGGACCAAGTCACCGTCTAGTGGCGCGG</p> <p>1 CAGCTGGGGTCCCTGAGACTCTCTCTGACGCTCTGGATTACCTTTAGCAGCTATGCCATGAGCT</p> <p>71 GGTCCGCCAGGCTCCAGGAAGGGCTGGAGTGGTCTCAGCTATAGTGGTGGTAGCACATA</p> <p>141 CTACGCAGACTCCGTGAAGGCCGGTTCACCATCTCCAGAGCAATCCAGAACACGCTGTATCTGCAA</p> <p>211 ATGAACAGCCTGAGAGCCGAGGACACGGCCGTGTTACTGTGCGAGAGATTGGAGATGGCAACAATTG</p> <p>281 GGGCTGGTTCACCCCTGGGCGCAGGCAACCCTGTCCAGTCTCGAGTGGAGCGCGGTTCCAGGCGG</p> <p>351 AGTGGCTCTGGCGGTGGCGAAGTGCATTTCTCTGAGCTGACTCAGGACCCCTGTCTGTCTGGCC</p> <p>421 TTGGACAGACAGTCAAGATCACATGCCAAGGAGAACCTCAGAAGTTTCTGCAAGCTGGTACCAGC</p> <p>491 TGAAGCCAGGACAGGCCCTGTACTTGTCTATCTATGTAAGAACACCGGCCCTCAGGGATCCAGACCG</p> <p>561 ATTCTCTGCCCTCCAGCTCAGGAACACAGCTTCTTGGCCATCATTGGGCTCTGGCGGAAGATGAGGCT</p> <p>631 GACTACTACTTAACCTCCGGGACAGCAGTGGTAACCTTATGTCTCGAACTGGGACCAAGTCAACG</p> <p>701 TCTAGGTGGCGCGG</p>
scFv22	58	<p>1 GGTCTTCGTTGAAGGTCTCTCTGCAAAATTTCCGGAGGCAATCTCAATAGGCTTACTGTACCTGGGTGCG</p> <p>71 ACAGCCCTTGACAAAGGCTTGAGTGGTGGCGAGGATTCTCCGACTCAGTAATCAAGTCGTGAAG</p> <p>141 TTCCAGCGCAGACTCAACTGACCTGTACACTCCAGCGCACACCTATTTAGAACTGAGGAGCCTGA</p> <p>211 AATCTGAAGACACGGCCGTCTATTATGTGGCGCTCATCTAAATAGGTTCCAGGTTGGGAGCTCGA</p> <p>281 CTACTGGGCGGGGACCCCTGGTACCGTCTCGAGTGGAGCGCGGTTCCAGCGGAGGTGGCTCTGGC</p> <p>351 GGTGGCGAAGTGACAGTCTGTCTGACGACCGCCCTCAGCGTCTGTACCCCGGCGCAGAGGTCA</p> <p>421 CCATCTCTTGTCTGGAAGCAGCTCCAACATCGGAAGAAATTAATCTACTGTACCAGCAGTCCCAGG</p> <p>491 AACGGCCCCCAACTCCTCGTCTATAACAATAATCAGCGGCCCTCAGGGGTCCCTGACCGATTCTCTGGC</p> <p>561 TCCAAAGTCTGGCACCTCAGCCTCCCTGGGCATCAGTGGGCTCCGTCGAGGATGAGGCTGATTATTACT</p> <p>631 GTTCAACATGGGATGACAGCCTGAGTAGTCCGGTATTCCGGCGGGGACCAAGCTGACCGTCTAGGTGC</p> <p>701 GGCCGG</p> <p>1 CACCTTTAGCAGCTATGCCATGAGTGGGTCCGCGAGGCTCCAGGAAGGGCTGGAGTGGTCTCAGCT</p> <p>71 ATTAGTGGTAGTGGTAGCACATACTACGAGACTCCGTGAAGGCCGTTCAACATCTCCAGAGACA</p> <p>141 ATTCCAAGAACACGCTGTATCTGCAATGAACAGCTGAGACCGAGGACACGGCCGTGTATTACTGTCC</p> <p>211 GAGAGGTAGACGGCGGGAGAGAGTATTATAATGATCGGGAGTTAGACCACATAACGACACTCTGGC</p> <p>281 ATGGACGCTCTGGGCGCGGGCACCCCTGGTCAACGCTCTGAGTGGAGCGCGGTTCCAGCGGAGGTGGCT</p> <p>351 CTGGCGGTGGCGGAAGTGACATTTCCTATGTGCTGACTCAGCCACCTCAGCGTCTGGGACCCCGGCA</p> <p>421 TAGGGTCAACATCTCTTGTCTGGAAGCAGCTCCAACATCGGAAGTAATTATGTATATACTGTACCAGCAG</p> <p>491 CTCCAGGAACGGCCCCCAAACTCTCTATAGGAATAATCAGCGGCCCTCAGGGGTCCCTGACCCGAT</p>
scFv23	59	<p>1 CACCTTTAGCAGCTATGCCATGAGTGGGTCCGCGAGGCTCCAGGAAGGGCTGGAGTGGTCTCAGCT</p> <p>71 ATTAGTGGTAGTGGTAGCACATACTACGAGACTCCGTGAAGGCCGTTCAACATCTCCAGAGACA</p> <p>141 ATTCCAAGAACACGCTGTATCTGCAATGAACAGCTGAGACCGAGGACACGGCCGTGTATTACTGTCC</p> <p>211 GAGAGGTAGACGGCGGGAGAGAGTATTATAATGATCGGGAGTTAGACCACATAACGACACTCTGGC</p> <p>281 ATGGACGCTCTGGGCGCGGGCACCCCTGGTCAACGCTCTGAGTGGAGCGCGGTTCCAGCGGAGGTGGCT</p> <p>351 CTGGCGGTGGCGGAAGTGACATTTCCTATGTGCTGACTCAGCCACCTCAGCGTCTGGGACCCCGGCA</p> <p>421 TAGGGTCAACATCTCTTGTCTGGAAGCAGCTCCAACATCGGAAGTAATTATGTATATACTGTACCAGCAG</p> <p>491 CTCCAGGAACGGCCCCCAAACTCTCTATAGGAATAATCAGCGGCCCTCAGGGGTCCCTGACCCGAT</p>

Fig. 11

scFv24	60	<p>561 TCCTGGCTCCAGTCTGGACCTCAGCCTCCCTGGCCATCAGTGGGTCGGTCCGATCAGGATGAGGCTGA</p> <p>631 TTATTACTGTGCAGCATGGGATGACACCCCTAAGTGGTGTCTTATTCGGCGGAGGACCAAGCTGACCGTC</p> <p>701 CTAGTGGGCGCG</p>
scFv25	61	<p>1 GCTATGCCATGAGCTGGTCCGCCAGGCTCCAGGATCCAGGAGGGCTGAGTGGTCTCAGCTATTAGTGGTAG</p> <p>71 TGGTGGTAGCATACTACGAGACTCCGTGAAGGCGGTTACCATCTCCAGAGACAATTCGAAGAAC</p> <p>141 ACGCTGATCTGCAAAATGAACAGCCTGAGAGCCGAGGACACGGCGGTATTACTGCGGAGAAATACAG</p> <p>211 GAAAGGCATTACTTTGGTTCGGGAGTATATTGTAGACTGTAGCCGAGTTCTACATCCCGCATGGA</p> <p>281 CGTCTGGGCCAGGGCACCCCTGGTACCGTCTCAGTGGAGGCGGGTTCAGGCGAGGTGGCTCTGGC</p> <p>351 GGTGGCGGAAGTGCACAGGCTGTGTGACTCAGCCCTCAGCGTCTGGACCCCGGGCAGAGGGTCA</p> <p>421 CCATCTCTTGTCTGGAAGCACCTCCACATCGGAAGAAATATAGATTGGTACCAGAGCTCCAGG</p> <p>491 AACGGCCCCAACTCCTCATCTATAGGAATAATAAGCGGCCCTCAGGGTCCCTGACCGATTCTCTGGC</p> <p>561 TCCAAAGTCTGGCACCTCAGCCTCCCTGGCCATCAGTGGGCTCCGCTCCGAGGATGAGGCTGATTACT</p> <p>631 GTGAGCTTGGGATGACAGCCTGAGTGGTGGTATTTCGGCGGAGGACCAAGCTGACCGTCTCTAGGTGC</p> <p>701 GGCCGC</p>
scFv26	62	<p>1 TGGAGTCTGGGGAGGCTTGGTACAGCTGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCA</p> <p>71 CTTTAGCAGTATGCCATGAGCTGGTCCGCCAGGCTCCACGGAAGGGGTGGAGTGGTCTCAGCTATT</p> <p>141 AGTGGTAGTGGTAGCATACTAGCAGACTCCGTGAAGGCGGTTCCACATCTCCAGAGACAATT</p> <p>211 CCAAGAACAGCTGTATCTGCAATGAACAGCCTGAGAGCCGAGGACACGGCGTGTATTACTGTGGAG</p> <p>281 AGATTGGAGATGGCAACAATTGGGGCTGGTTCACCCCTGGGGCGAGGACACCGTCCCGTCTCG</p> <p>351 AGTGGAGCGCGGTTACGGCGAGGTGGTCTGGCGGTGGCGGAAGTGCATTGAAACGACACTCACGC</p> <p>421 AGTCTCCAGCCACCTGTCTCTCCGGGGACAGAGCCACCTCTCCTGAGGGCCAGTCAAAAGTAT</p> <p>491 TGGTGGCAACTTAGCCTGGTACAGAGAAACCTGGCCAGCCTCCAGGCTCATCTTTGGTGCATCC</p> <p>561 ACTAGGGCCTCTGGTACCCAGCCAGGTTAGTGGCAGTGGGTCTGGACAGAGTTCACTCAACATCA</p>

Fig. 11

scFv27	63		631 GCAGCCTGCAGTCTGAAGATTTTCAGATTTTACTGTACAGAGTATAATAACTGGCCTCCATGGACTTT
			701 CGGCCAAGGGACACGACTGGAGATTAACGTCGGCCGG
scFv28	64		1 ACAGCCTGGGGGTCCTGAGACTCTCCTGTGAGCCTCTGGATTACCTTTAGCAGCTATGCCATGAGC
			71 TGGGTCGGCCAGGCTCCAGGGAAGGGCTGGAGTGGTCTCAGCTATTAGTGGTAGGTAGCAGCAT
			141 ACTACGAGACTCCGTGAAGGCGGTTACACATCTCCAGAGACAATTCAGAGAACACCCCTGTATCTGCA
			211 AATGAACAGCCTGAGAGCCGAGGACACGGCCGTATTACTGTGGAAGGGGACGGGTAGTGGCTGGA
			281 ACTACGTACTACTACTACGGTATGGACGTCTGGGGCGAGGAGCCACGCTCACCCTCTGAGTGGAGCGG
			351 GCGGTTACGGCGGAGGTGGCTCTGGCGGTGGGGGAGTGACAGTCTGTGCTGACGACGCCGCCCTCAGC
			421 GTCTGGGGCCCCGGGACAGAGATCACCATCTCTTGTTCGGGAAGCACCTCAACATCGGGAGAAATTAT
			491 GTTGACTGGTATAAACAACCTCCCGGAACGGCCCCCAACTCTTCACTATAAGAAATGATCAGCGACCT
			561 CAGGGTCCCTGACCGATTCTCTGGCTCCAGTCTGGCACTCAGCCCTCCCTGGTCTGTAAGTGGACTCCG
			631 CTCCGAGGATGAGCTGATTATTACTGTCTGACTTGGGATGACAGCCCTGAGTGGTCCGGGTGTTCCGGCGG
			701 GGGACCAAGCTGACCGTCTAGTGGCGCCGC
scFv29	65		1 GGCCTCTGGATTGGGCTCAATGGCTATGAATGCATTCGGTGGCCAGGCCCCCGGACAAAGGCTTGAG
			71 TGGTGGGCGGATCAACGCTGCCATTGGGGACACACGGTATTCAAGGAGTTCAGGATAGAGTCTCCA
			141 TTACAGAGACATGTCCGGAAACACAGTCTACATGGAGATGAGAGGTGAGATTTGAAGACACACGGCTGT
			211 TTATTATTGTGTGAGATTCCAGGATTGGGACATTTGAATAGTGCCACTGTTCAGCCCTTTTGACCCAC
			281 TGGGCAAGGAACCTTGGTACCGTCTCAGTGGAGCGCGGTTTCAGCGGAGGTGGCTCTGGCGGTG
			351 GCGAAGTGCACTTCTCTGAGCTGACTCAGGACCCCTGTGTCTGTGGCTTGGGACACAGACTCAG
			421 GATCACATGCCAAGGACAGCCCTCAGATACTATTCTGCAAGTTGTTACCGGCAAGCCAGGCGAGGCC
			491 CCTGTTATTGTCATGTATGTTAAACACCCCGCGGCTCAGGATCCCAGACCAATCTCTGGCTCCAGCT
			561 CAGGAACACAGCTTCTTGACCATCAGTGGGCTCAGCGGAGATGAGGCTGACTATTATTGTAATC
			631 CCGAGACAGTAGTGGTAAACCATCTGGTCTCGGCGGAGGACCAAGCTGACCTCTAGGTGGCGCGG
scFv30	66		1 GTACAGCCTGGGGGTCCTGAGACTCTCTGTGAGCCTCTGGATTACCTTTAGCAGCTATGCCATGA
			71 GCTGGTCCGCCAGGCTCCAGGGAAGGGCTGGAGTGGTCTCAGCTATTAGTGGTAGTGGTGGCAGCAC
			141 ATACTACGAGACTCCGTGAAGGCGGTTACCATCTCCAGAGACAATTCAGAAACACGCTGTATCTG
			211 CAAATGAACAGCCTGAGAGCCGAGGACACGGCCGTGTATTACTGTGCGAGAGATCATCGGTGGGACGCG
			281 GAGGTGGAGCTACTTACTAGCCCTTTGGACTACTGGGCGCAAGGACAATGGTCACCCGTCTCGAGTGG
			351 AGGCGCGGTTACGGCGGAGGTGGCTCTGGCGGTGGGGAAGTGGACTGCCTGTGCTGACTCAGCCACCC
			421 TCAGCGTCTGGACCCCCGGGACAGAGGTCAACATCTTGTCTGGAAGCAGCTCCACATCGGAAGGA
			491 ATTATGTATCTGTTACAGCAGCTCCAGGAACGGCCCCCAACTACTCATCTATAGAAATATCTGG
			561 GCCCTCAGGGTCCCTGACCGATTCTCTGGCTCCAGTCTGGCACTCAGCCCTCCCTGGCCATCAGTGGG
			631 CTCCGTCGAGGATGAGGCTGATTATTACTGTGAGCATGGGATGACACCCCTGAGTGGTGGTATTTCG
			701 GCGGAGGGAACAAAGCTGACCGTCTAGTGGCGCGG
scFv30	66		1 CGGAGGTGAGGAAGCCTGGGGCCCTCACTGAAGATTCTCTGCAAGGCTTCTGGATTACGTTCACTAGTTA
			71 TCTATTCCATTGGTGGCCAGGCCCGCCGACAAAGGCTTGAGTGGATGGGTGGATCAACGCTGGCAAT
			141 GGAAACACAAATATTACCGAAGTTCAGGGCAGAGTTACCTTACCGGGGACACATCCAGGAGCACAA

Fig. 41



<p>scFv31</p>	<p>67</p>	<p>1 TGGTACGGCCTGGGGGTCCCTGAGACTCTCTGTGCAGCCTCTGGATTACACCTTTGATGATTATGGCAT  71 GAGTGGGTCCGCCAAGCTCCAGGGAAGGGCTGGAGTGGTCTCTGTGTTATTAATTGGAATGGTGTAGC  141 ACAGTTATGCAACTCTGTGAAGGCGGATTCACCATCTCCAGAGACAACGCCAAGAACTCCCTGTATC  211 TGCATAAACAAGTCTGAGAGCCGAGGACACAGCCGTGTATTAATCTGCAAGAAGCGGTATGCGTTGGA  281 TTATTGGGCGAGGGACAATGGTCACTCTGAGTGGAGGCGGCGGTTCAGGCGGAGGTGGCTTGGC  351 GGTGGCGGAAGTCACTTTCTGTAGCTACTCAGGACCTGCTACTGTGTCTGTGGCCTTGGACAGA  421 CAGTCAGGATAACTTGTGAGGCGACAGCCTCGACAATATTAATGCACCTGGTATCAACAGAAGCCTGG  491 ACAGGCCCTCTACTTGTCTTTCTGAAAACAGGCGCCCTCAGGATCCAGACCGTTTCTCTGGC  561 TCCAACTCGGGAAACACAGCTTCTTGACATCACTGGGCTCAGGCGGAGGTGAGGCTGACTATTACT  631 GCAACTCCCGGAAATCGGTACTAATCGAATCCTATTCCGCGGAGGACCAAGCTGACCGTCCCTAGGTGC  701 GCGCGC</p>
<p>scFv32</p>	<p>68</p>	<p>1 TTGGTTACGCTGGAGGGTCCCTGAGACTCTCTGTGCAGCCGCTGGATTACCTTCAGTACTTTTGAAA  71 TGAATTGGTCCGCCAGGCCAGGAGGGCTGGAGTGGTTCATATATTAATTAGTGGTAGTGGTCATGC  141 CATATACTACGAGACTCTGTGAAGGCGGATTCACCATCTCCAGAGACAACGCCAACAACCTCACTGTAT  211 CTGCAATGACAGTCTGACAGCCGAGGACACGGCTGTATTAATCTGTGCGAGAAAAGTACCACTAC  281 TACTTGGCAAGTACGACTACGGTATGGAGTGGAGTGGGAGTGCATGCTGTGACTCAGCCACCTCA  351 CGGCGGTTACGGCGGAGGTGGCTCTGGCGTGGGAGTGCATGCTGTGAGCAGCTCCAAACATCGGAAGTAATA  421 GCGTCTGGGACCCCGGAGAGGTCAACATCTCTGTGGAAGCAGCTCCAAACATCGGAAGTAATA  491 CTTAACTGGTACAGAGCTCCAGGAACGCGCCCAACTCTCATCTATAGTAATGATCAGCGGCC  561 CTCAGGGTCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACTCAGCCCTCCCTGGCCATCAGTGGGCTC  631 CAGTCTGAGGATGAGGCTGATTATTACTGTGACAGTGGGATGACAGCCTGAATGGCTGGGTGTTGCGG  701 GAGGGACCAAGGTCAACCTCCTAGTGGCGGCCG</p>
<p>scFv33</p>	<p>69</p>	<p>1 AGGGCCTCTGGGGGACCTCCAGCAGTCTCTGCTTTTTCAGCTGGTGGTGGACAGGCCCTGGACAGGGCTTC  71 AGTGATGGAGGGATCATCCCTCTCTTTGGTGCAGCAAACTACGCACAAAGTCCGGGCGGACTCAC  141 GATTACCGGAGCAGTCCAGGGCAGCTTACATGAACCTGAAAATTTGAGTCTGACGACACGGCC  211 GTTTATTCTGTGCGACTAACGGACAGAGGTCGCCACCCGCTACTACTACGGCATGGAGCTCTGGG</p>

Fig. 41

scFv34	70	281	GCCGAGGACCCCTGGTCACCGTCTCAGTGTGAGGGGGCGGTTACGGCGGAGTGGCTCTGGGGTGGCGG
		351	AAGTGACAGTCTGTGTGACGACGCTGCCCTACGCTCTGGGGCCCCGGGAGAGGATCACCATCTCT
		421	TGTTCCGGAAGCACCTTCAACATCGGGAGAAATATGTGTGTTGATTAACAACCTCCCGGAACGGCCC
		491	CCAAACTCTTTCATCTATAAGAAATGATCAGCACCTCAGGGTCCCTGGCCGATTTCTCTGGCTCCAAGTC
		561	TGGCACCTCAGCCTCCCTGGTGGTAAAGTGGATCCGCTCGAGGATGAGGTGATTTACTGTGTGACT
		631	TGGGATGACAGCCTGAGTGGTCCGCTGTTCCGGGGGGGACCAAGCTGACCGTCTTAGTGGGGCCGC
		1	GCCTGCAGGGTTTTGGTTACACCTTCGTGATCATGGAATTAAGTTGGTGGGACAGGCCCTGGACAAG
scFv35	71	71	GGCTTGAGTGGATGGGATGGATCAACATCACGACGGTCACACAAACTATGCACAAAGACACAGGCCAG
		141	ACTCACCATGACCACAGATGCCCTCCATTAACTTCTTACATGGAGCTCGGAGCCTGACATCTGACGAC
		211	ACGGCCGCTCTATTATGTGCCGGGGGAGAGACTCGGACCGCACATAGATCTCGCAGGGCCACGAACG
		281	ACAATGGATATCCCTATTACTCTCTGGTCTGGACGCTCTGGGCGCAAGGAACCCCTGGTCAACGCTCGAG
		351	TGAGCGCGCGGTTACAGCGGAGTGGCTCTGGCGGTGGCGAAGTGCAGAGCTGTGCTGACTCAGCG
		421	TCCTCAGCGTCTGGGACCCCGGACAGAGGTCAACATCTCTTGTCTGGAAGCAGCTCCAACATCGGAA
		491	GTAATTATGTATCTTGGTACCAAGAGCTCCAGGAACGGCCCCCAACTCTCTATATAGGAATAATCA
scFv36	72	561	GCGGCCCTCAGGGTCCCTGACCGATTCTCTGGCTCCAAGTCTGGCACCTCAGCCTCCCTGGCCCATCAGT
		631	GGGCTCGGTCCGAGGATGAGGCTGATTATTAATGTGTGACGATGGATGACAGCCTGAGTGGTGGGTGT
		701	TCGGCGAGGGACCAAGCTGACCGTCTTAGTGGGGCCGC
		1	AGCCTGGGGCCTCAGTGAAGGTTTCTGCAAGGCATCTGGATACACCTTCACCAGCTACTATATGCACTG
		71	GGTGACAGGCCCTGGACAAAGGCTTGAGTGGATGGGAATAATCAACCTAGTGGTAGCACAAAGC
		141	TACGCACAGAAGTCCAGGGCAGAGTCAACATGACCAGGACAGTCCAGGACAGCTACATGGAGC
		211	TGAGCAGCCTGAGATCTGAGGACACGGCCGTGTTACTGTGCGAGAGTTCGGGCGCAGAAATGGTTCG
scFv36	72	281	GGGAGTTATTATAGACCCCTACGGTATGGAGTCTGGGCGGAGGACCTGGTCAACGCTCGAGTGGGA
		351	GGCGCGGTTTACGCGGAGGTGGCTCTGGCGGTGGCGGAGTGCACAGTCTGTGCTGACTCAGCCACCT
		421	CAGCGTCTGGACCCCGGCGAGGGTCAACATCTCTTGTCTGGAAGCAGCTCCAGCTCGGAAGTAA
		491	TTATGTATCCTGTATCAGCAGTCCCAGGAACGGCCCCCAACTCTCTATATAGGAATAATCAGCGG
		561	CCCTCAGGGTCCCTGACCGGTTCTCTGGCTCCAAGTCTGGCATTTACGCTCCCTGGCCCATCAGTGGG
		631	TCCGTCGAGGATGAGGCTGATTTTACTGTGTAGCTGGATGACAGCCTGAGGGAATATGTCTTCGG
		701	AACTGGGACCAAGTCAACCGTCTAGTGGGGCCGC
scFv36	72	1	GGAGTCTGGGGAGGCTTGTAAGCCTGGGGGGTCCCTGAGACTCTCTGTGACGCTCTGGATTCAAC
		71	TTTAGCAGCTATGCCATGAGTGGTCCGACAGGCTCCAGGAAGGGCTGGAGTGGTCTCAGCTATTA
		141	GTGGTAGTGGTGTAGCACATACGACACTCCGTGAAGGGCCGGTTCACCATCTCCAGAGACAATTC
		211	CAAGAACACGCTGTATCTGCAATGAACAGCCTGAGAGCGGAGGACAGGCGGTGATTAATCTGTGGGAAA
		281	GGTGGACTAGGTGACCCACCGGGTGGTTTATATATGGGCGGAGGACAATGGTCAACCGTCTCGA
		351	GTGGAGGGGGGTTTTCAGGGGAGGTGGTCTGGCGGTGGCGGAGTGCATGCCCTGTGTGACTCAGCC
		421	CCCTCAGCGTCTGGGGCCCCCGGACAGGATCACCATCTCTTGTTCGGAAGACCTTCAACATCGGG
scFv36	72	491	AGAAATTATGTGACTGTATATAACAACCTCCCGGAAAGCCCCCAACTCTTCTATATAAGATGATC
		561	AGGACCCCTCAGGGGTCCCTGACCGATTCTCTGGTCCAAGTCTGACACCTCAGCCTCCCTGGTCTAAG

Fig. 11

		631	TGGACTCCGCTCCGAGGATGAGGCTGATTATTACTCTCTGACTTGGGATGACAGCCTGAGTGGTCCGGTG
		701	TTCCGGCGGGGGACCAAGCTGACCGTCTTAGGTGGGCGCGC

Fig. 11

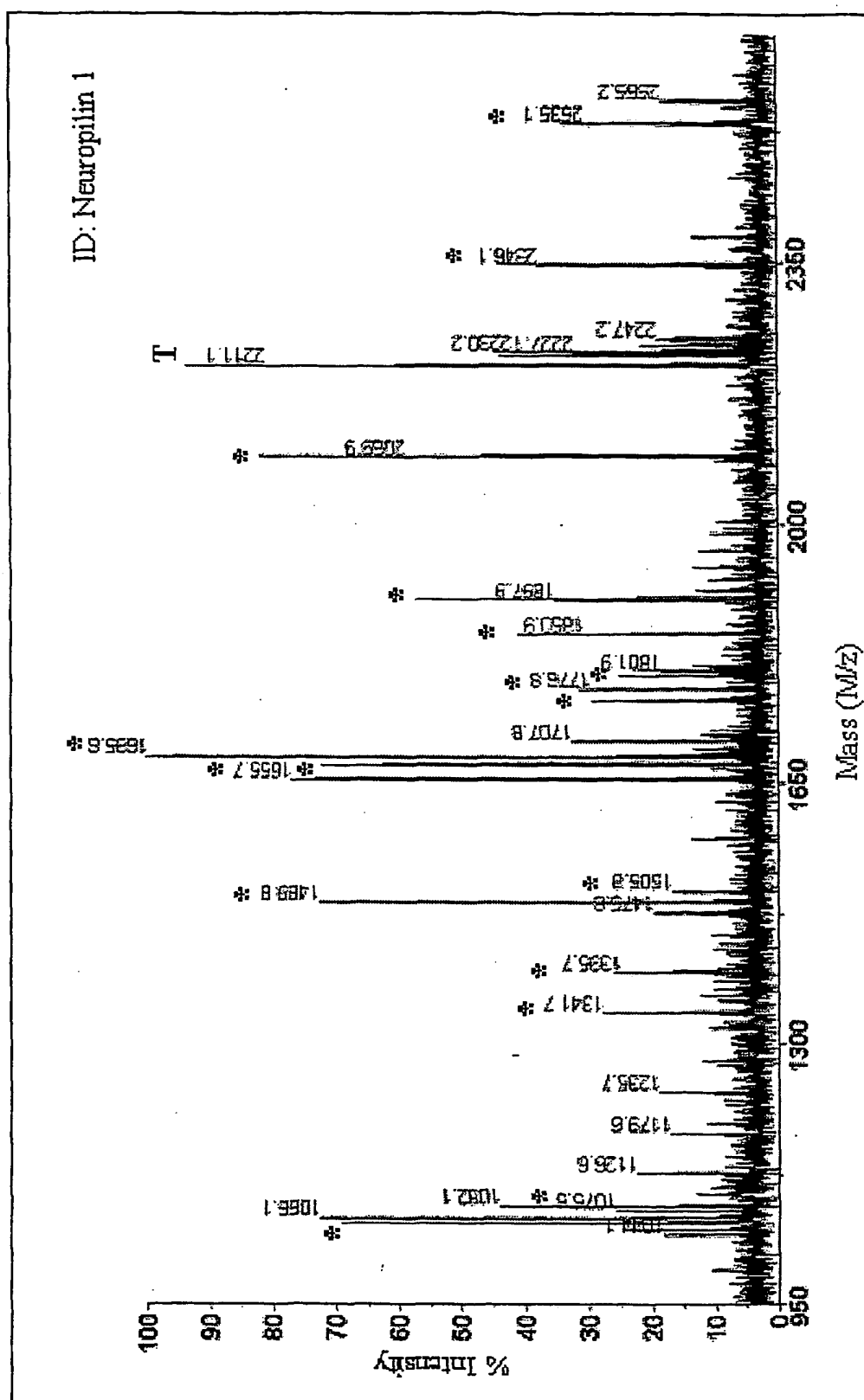


Fig. 12

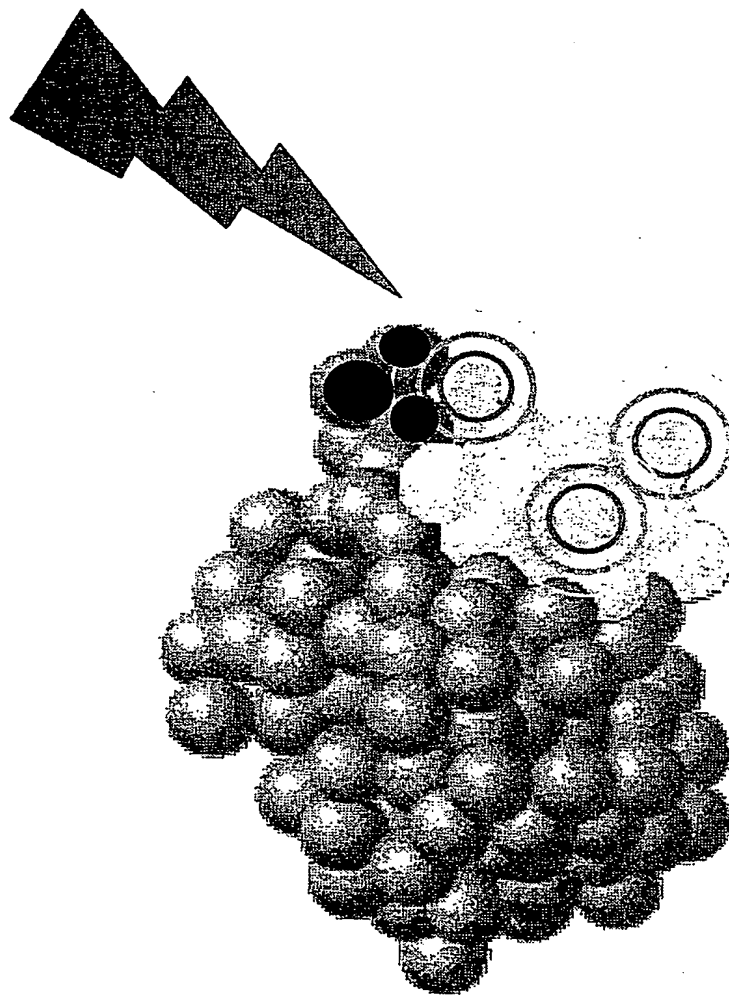


Fig. 13



Fig. 14c



Fig. 14b



Fig. 14a

**Tab. 1: Inhibition of tube formation**

scFv	Average inhibitory effect
control (10% PBS)	0.8
scFv4	1.7
scFv5	1.6
scFv7	2.4
scFv8	2.4
scFv9	1.5
scFv11	2.2
scFv12	1.9
scFv13	2.1
scFv15	1.9
scFv16	1.6
scFv18	2.0
scFv19	1.6
scFv20	1.3
scFv21	2.0
scFv22	1.5
scFv23	2.1
scFv24	1.7
scFv25	2.3
scFv26	2.1
scFv27	2.3
scFv28	2.2
scFv29	2.1
scFv30	1.8
scFv31	2.4
scFv32	1.7
scFv33	2.1
scFv34	1.5
scFv35	1.4
scFv36	1.9
scFv7*	2.3
scFv8*	2.5
scFv13*	2.5
scFv25*	2.6
scFv26*	2.4
scFv28*	2.1
scFv31*	2.3
scFv33*	2.1
anti-alpha-2-integrin	2.3
anti-NP-1	1.1

**Fig. 15**

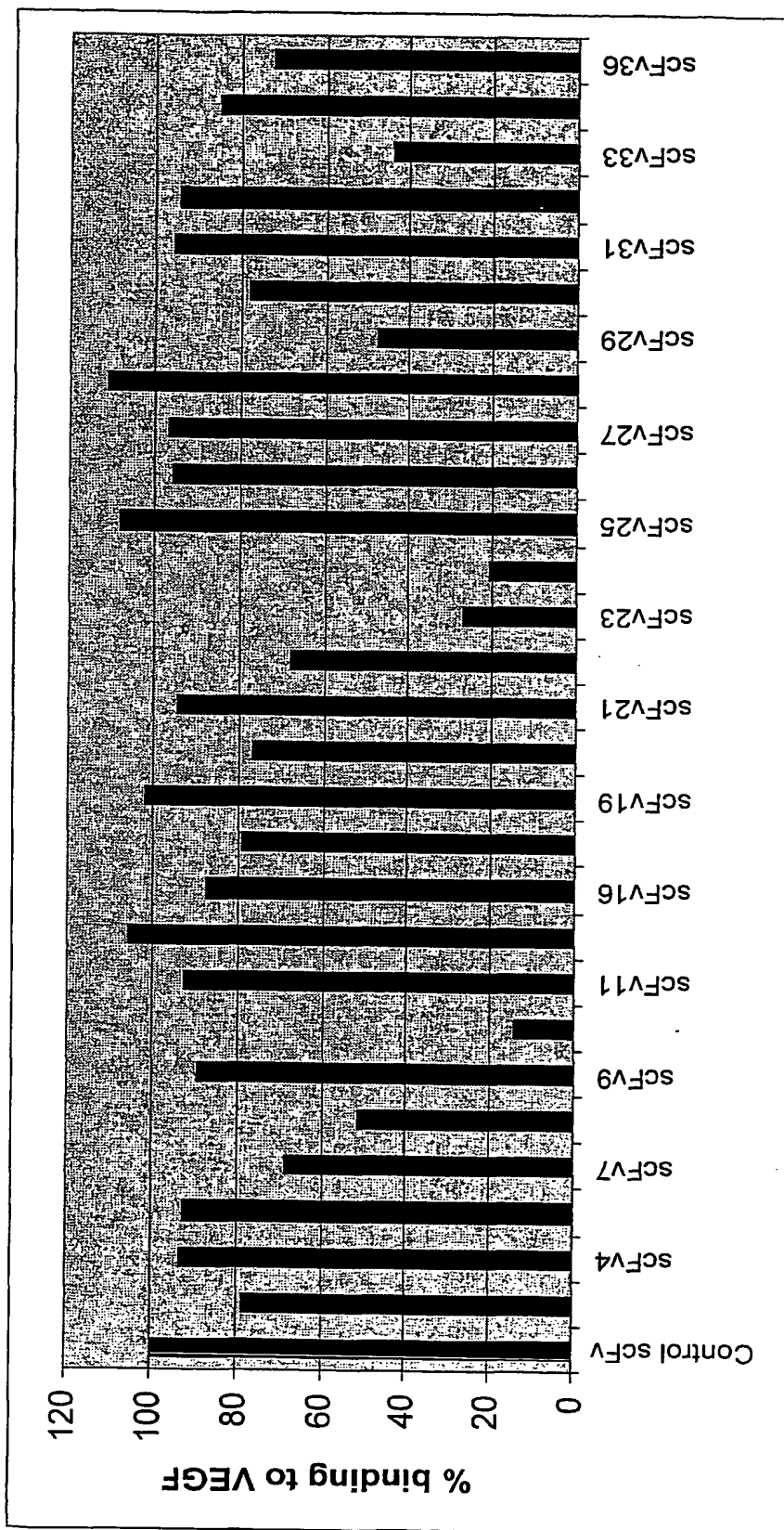


Fig. 16



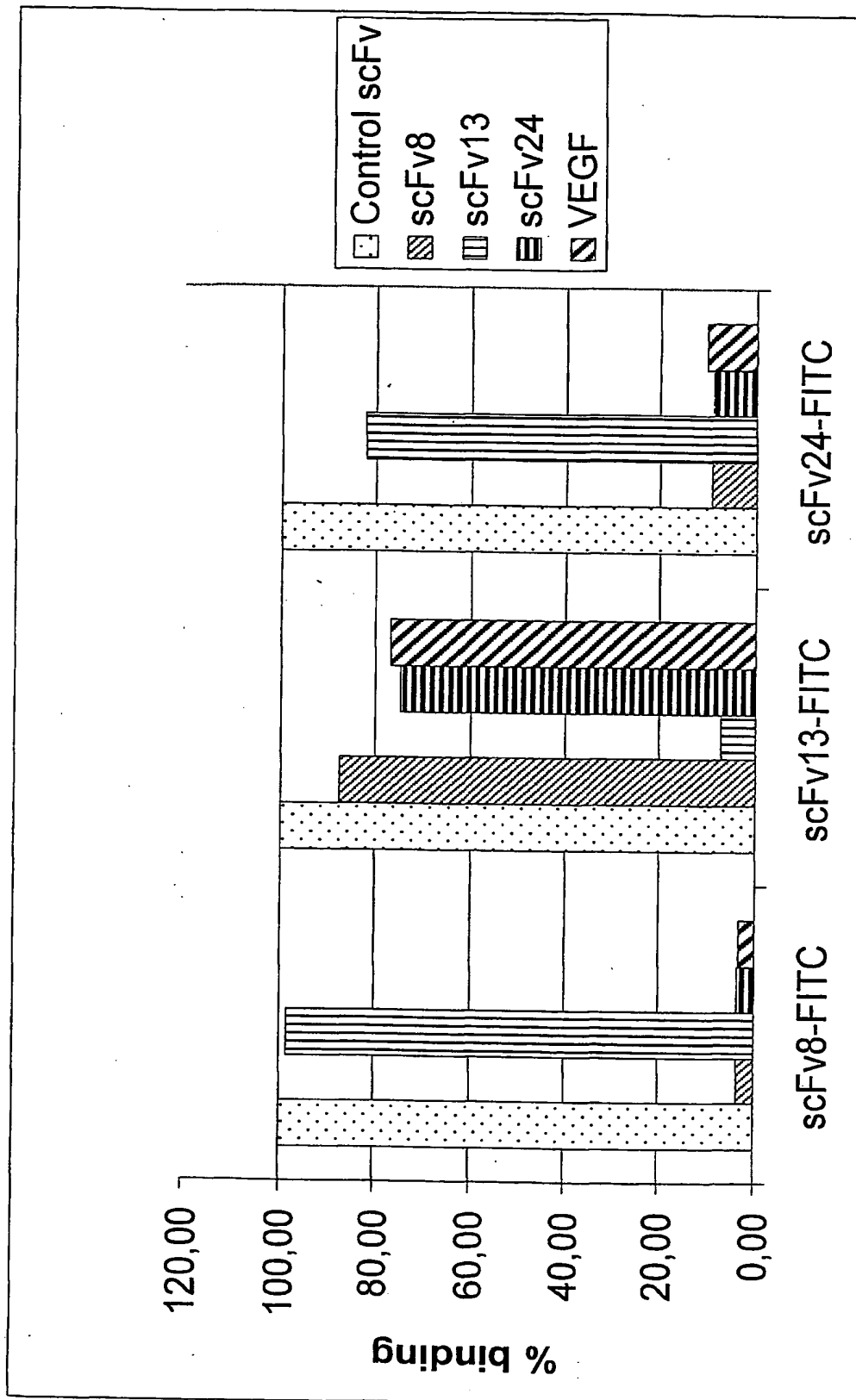


Fig. 17

**Tab.2 Transendothelial Invasion assay**

scFv	Inhibition of Invasion
scFv26	+
scFv27	+
scFv34	+
ScFv35	+

**Fig. 18**

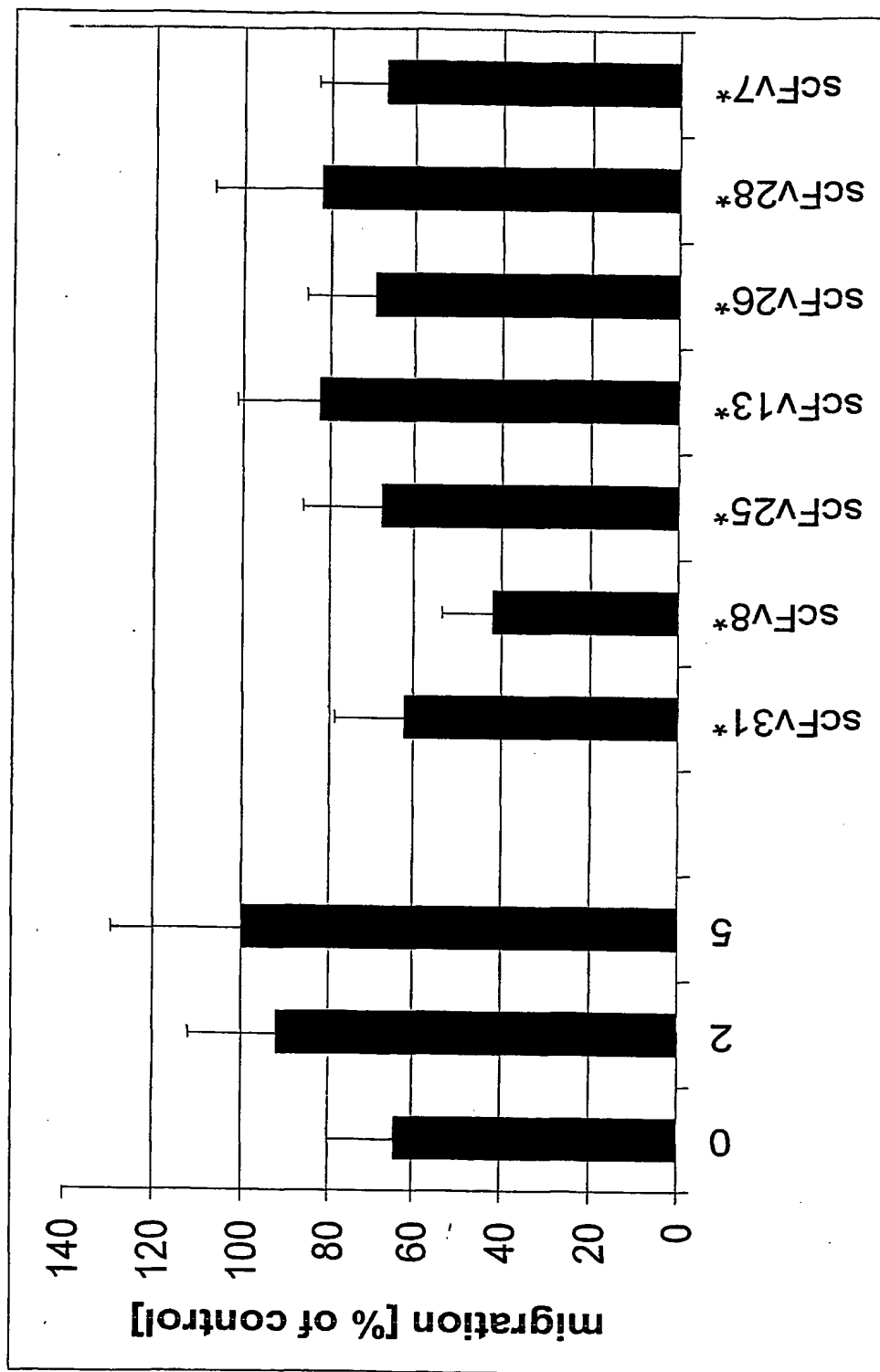


Fig. 19

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